Vol: 3

# Tumulus

Prænob: FRANCISCI Baronis VERVLAM, Vicecomitisq; S. ALBAN
In Cancello Eccleſiæ S. Mich: apud S. ALBANVM.

FRANCISCVS BACON BARO DE VERVLAM, S.ti ALBANI VIC.us
SEV NOTIORIBVS TITVLIS
SCIENTIARVM LVMEN, FACVNDIÆ LEX
SIC SEDEBAT

QVI POSTQVAM OMNIA NATVRALIS SAPIENTIÆ
ET CIVILIS ARCANA EVOLVISSET
NATVRÆ DECRETVM EXPLEVIT
COMPOSITA SOLVANTVR
AN. DNI. M.DC.XXVI.
ÆTAT. LXVI

TANTI VIRI
MEM.
THOMAS MEAVTYS
SVPERSTITIS CVLTOR
DEFVNCTI ADMIRATOR
H. P.

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THE

# WORKS

OF

# FRANCIS BACON,

Baron of *VERULAM*,

VISCOUNT *St. Alban*,

AND

Lord High Chancellor of *England*.

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# NATURAL HISTORY.

## CENT. I.

*Experiments in conſort, touching the ſtraining and paſſing of bodies, one through another; which they call* Percolation.

DIG a pit upon the ſea-ſhore, ſomewhat above the high-water mark, and ſink it as deep as the low-water mark; and as the tide cometh in, it will fill with water, freſh and potable. This is commonly practiſed upon the coaſt of *Barbary*, where other freſh water is wanting. And *Caeſar* knew this well when he was beſieged in *Alexandria:* for by digging of pits in the ſea-ſhore, he did fruſtrate the laborious works of the enemies, which had turned the ſea-water upon the wells of *Alexandria*; and ſo ſaved his army being then in deſperation. But *Caeſar* miſtook the cauſe, for he thought that all ſea-ſands had natural ſprings of freſh water: but it is plain, that it is the ſea-water; becauſe the pit filled according to the meaſure of the tide: and the ſea-water paſſing or ſtraining through the ſands, leaveth the ſaltneſs.

2. I remember to have read, that trial hath been made of ſalt-water paſſed through earth, through ten veſſels, one within another; and yet it hath not loſt its ſaltneſs, as to become potable: but the ſame man ſaith, that (by the relation of another) ſalt-water drained through twenty veſſels, hath become freſh. This experiment ſeemeth to croſs that other of pits, made by the ſea-ſide; and yet but in part, if it be true, that twenty repetitions do the effect. But it is worth the note, how poor the imitations of nature are in common courſe of experiments, except they be led by great judgment, and ſome good light of axioms. For firſt, there is no ſmall difference between a paſſage of water through twenty ſmall veſſels, and through ſuch a diſtance, as between the low-water and high-water mark. Secondly, there is a great difference between earth and ſand; for all earth hath in it a kind of nitrous ſalt, from which ſand is more free; and beſides, earth doth not ſtrain the water ſo finely, as ſand doth. But there is a third point, that I ſuſpect as much or more than the other two; and that is, that in the experiment of tranſmiſſion of the ſea-water into the pits, the water riſeth; but in the experiment of tranſmiſſion of the water through the veſſels, it falleth. Now certain it is, that the ſalter part of water (once ſalted throughout) goeth to the botom. And therefore no marvel, if the draining of water by deſcent, doth not make it freſh: beſides, I do ſomewhat doubt, that the

very dashing of the water, that cometh from the sea, is more proper to strike off the salt part, than where the water slideth of its own motion.

3. It seemeth Percolation, or Transmission, (which is commonly called straining) is a good kind of separation, not only of thick from thin, and gross from fine, but of more subtile natures; and varieth according to the body through which the transmission is made: as if through a woollen bag, the liquor leaveth the fatness; if through sand, the saltness, &c. They speak of severing wine from water, passing it through ivy wood, or through other the like porous body; but *non constat*.

4. The gum of trees (which we see to be commonly shining and clear) is but a fine passage or straining of the juice of the tree through the wood and bark. And in like manner, cornish diamonds, and rock rubies (which are yet more resplendent than gums) are the fine exudations of stone.

5. Aristotle giveth the cause, vainly, why the feathers of birds are of more lively colours, than the hairs of beasts; for no beast hath any fine azure, or carnation, or green hair. He saith, it is, because birds are more in the beams of the sun than beasts; but that is manifestly untrue; for cattle are more in the sun than birds, that live commonly in the woods, or in some covert. The true cause is, that the excrementitious moisture of living creatures, which maketh as well the feathers in birds, as the hair in beasts, passeth in birds through a finer and more delicate strainer than it doth in beasts: for feathers pass through quills; and hair through skin.

6. The clarifying of liquors by adhesion, is an inward Percolation; and is effected, when some cleaving body is mixed and agitated with the liquors; whereby the grosser part of the liquor sticks to that cleaving body; and so the finer parts are freed from the grosser. So the apothecaries clarify their syrups by whites of eggs, beaten with the juices which they would clarify; which whites of eggs gather all the dregs and grosser parts of the juice to them; and after the syrup being set on the fire, the whites of eggs themselves harden, and are taken forth. So ippocras is clarified by mixing with milk, and stirring it about, and then passing it through a woollen bag, which they call *Hippocrates's Sleeve*, and the cleaving nature of the milk draweth the powder of the spices, and grosser parts of the liquor to it; and in the passage they stick upon the woollen bag.

7. The clarifying of water, is an experiment tending to health; besides the pleasure of the eye, when water is crystalline. It is effected by casting in and placing pebbles at the head of the current, that the water may strain through them.

8. It may be, Percolation doth not only cause clearness and splendour, but sweetness of savour; for that also followeth as well as clearness, when the finer parts are severed from the grosser. So it is found, that the sweats of men, that have much heat, and exercise much, and have clean bodies, and fine skins, do smell sweet; as was said of *Alexander*; and we see, commonly that gums have sweet odours.

*Experiments in consort, touching Motion of bodies upon their pressure.*

9. Take a glass, and put water into it, and wet your finger, and draw it round about the lip of the glass, pressing it somewhat hard; and after you have drawn it some few times about, it will make the water frisk and sprinkle up, in a fine dew. This instance doth excellently demonstrate the force of compression in a solid body: for whensoever a solid body (as wood, stone, metal, &c.) is pressed, there is an inward tumult in the parts thereof, seeking

to deliver themſelves from the compreſſion: and this is the cauſe of all violent motion. Wherein it is ſtrange, in the higheſt degree, that this motion hath never been obſerved, nor inquired; it being of all motions the moſt common, and the chief root of all mechanical operations. This motion worketh in round at firſt, by way of proof and ſearch, which way to deliver it ſelf; and then worketh in progreſs, where it findeth the deliverance eaſieſt. In liquors this motion is viſible; for all liquors ſtrucken make round circles, and withal daſh; but in ſolids (which break not) it is ſo ſubtile, as it is inviſible; but nevertheleſs bewrayeth it ſelf by many effects; as in this inſtance whereof we ſpeak. For the preſſure of the finger, furthered by the wetting, (becauſe it ſticketh ſo much the better unto the lip of the glaſs) after ſome continuance, putteth all the ſmall parts of the glaſs into work; that they ſtrike the water ſharply; from which percuſſion that ſprinkling cometh.

10. IF you ſtrike or pierce a ſolid body, that is brittle, as glaſs, or ſugar, it breaketh not only where the immediate force is; but breaketh all about into ſhivers and fitters; the motion, upon the preſſure, ſearching all ways, and breaking where it findeth the body weakeſt.

11. THE powder in ſhot, being dilated into ſuch a flame, as endureth not compreſſion, moveth likewiſe in round, (the flame being in the nature of a liquid body) ſometimes recoiling; ſometimes breaking the piece; but generally diſcharging the bullet, becauſe there it findeth eaſieſt deliverance.

12. THIS motion upon preſſure, and the reciprocal thereof, which is motion upon tenſure, we uſe to call (by one common name) motion of liberty; which is, when any body, being forced to a preternatural extent or dimenſion, delivereth and reſtoreth it ſelf to the natural: as when a blown bladder (preſſed) riſeth again; or when leather or cloth tentured, ſpring back. Theſe two motions (of which there be infinite inſtances) we ſhall handle in due place.

13. THIS motion upon preſſure is excellently alſo demonſtrated in ſounds; as when one chimeth upon a bell, it ſoundeth; but as ſoon as he layeth his hand upon it, the ſound ceaſeth: and ſo, the ſound of a virginal ſtring, as ſoon as the quill of the jack falleth from it, ſtoppeth. For theſe ſounds are produced by the ſubtile percuſſion of the minute part of the bell, or ſtring, upon the air, all one, as the water is cauſed to leap by the ſubtile percuſſion of the minute parts of the glaſs, upon the water, whereof we ſpake a little before in the ninth experiment. For you muſt not take it to be the local ſhaking of the bell, or ſtring, that doth it: as we ſhall fully declare, when we come hereafter to handle ſounds.

*Experiments in conſort, touching Separations of bodies by weight.*

14. TAKE a glaſs with a belly and a long neb; fill the belly (in part) with water: take alſo another glaſs, whereinto put claret wine and water mingled; reverſe the firſt glaſs, with the belly upwards, ſtopping the neb with your finger; then dip the mouth of it within the ſecond glaſs, and remove your finger: continue it in that poſture for a time; and it will unmingle the wine from the water: the wine aſcending and ſettling in the top of the upper glaſs; and the water deſcending and ſettling in the bottom of the lower glaſs. The paſſage is apparent to the eye; for you ſhall ſee the wine, as it were, in a ſmall vein, riſing through the water. For handſomneſs ſake (becauſe the working requireth ſome ſmall time) it were good you hang the upper glaſs upon a nail. But as ſoon as there is gathered ſo much pure and



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unmixed water in the bottom of the lower glaſs, as that the mouth of the upper glaſs dippeth into it, the motion ceaſeth.

15. LET the upper glaſs be wine, and the lower water; there followeth no motion at all. Let the upper glaſs be water pure, the lower water coloured, or, contrariwiſe, there followeth no motion at all. But it hath been tried, that though the mixture of wine and water, in the lower glaſs, be three parts water and but one wine, yet it doth not dead the motion. This ſeparation of water and wine appeareth to be made by weight; for it muſt be of bodies of unequal weight, or elſe it worketh not; and the heavier body muſt ever be in the upper glaſs. But then note, withal, that the water being made penſile, and there being a great weight of water in the belly of the glaſs, ſuſtained by a ſmall pillar of water in the neck of the glaſs, it is that which ſetteth the motion on work: For water and wine in one glaſs, with long ſtanding, will hardly ſever.

16. THIS experiment would be extended from mixtures of ſeveral liquors, to ſimple bodies, which conſiſt of ſeveral ſimilar parts: try it therefore with brine, or ſalt-water, and freſh-water: placing the ſalt-water (which is the heavier) in the upper glaſs; and ſee whether the freſh will come above. Try it alſo with water thick ſugared, and pure water; and ſee whether the water, which cometh above, will loſe its ſweetneſs: for which purpoſe it were good there were a little cock made in the belly of the upper glaſs.

*Experiments in conſort, touching judicious and accurate infuſions, both in liquors and air.*

17. IN bodies containing fine ſpirits, which do eaſily diſſipate, when you make infuſions, the rule is; a ſhort ſtay of the body in the liquor, receiveth the ſpirit; and a longer ſtay, confoundeth it; becauſe it draweth forth the earthy part withal, which embaſeth the finer. And therefore it is an error in phyſicians, to reſt ſimply upon the length of ſtay, for increaſing the virtue. But if you will have the infuſion ſtrong, in thoſe kinds of bodies which have fine ſpirits, your way is not to give longer time, but to repeat the infuſion of the body oftner. Take violets, and infuſe a good pugil of them in a quart of vinegar; let them ſtay three quarters of an hour, and take them forth, and refreſh the infuſion with like quantity of new violets, ſeven times; and it will make a vinegar ſo freſh of the flower, as if a twelvemonth after, it be brought you in a ſaucer, you ſhall ſmell it before it come at you. Note, that it ſmelleth more perfectly of the flower, a good while after than at firſt.

18. THIS rule, which we have given, is of ſingular uſe for the preparations of medicines, and other infuſions. As for example: the leaf of burrage hath an excellent ſpirit, to repreſs the fuliginous vapour of duſky melancholy, and ſo to cure madneſs: but nevertheleſs, if the leaf be infuſed long, it yieldeth forth but a raw ſubſtance, of no virtue: therefore I ſuppoſe, that if in the muſt of wine, or wort of beer, while it worketh, before it be tunned, the burrage ſtay a ſmall time, and be often changed with freſh; it will make a ſovereign drink for melancholy paſſions. And the like I conceive of orange flowers.

16 RHUBARB hath manifeſtly in it parts of contrary operations: parts that purge; and parts that bind the body: and the firſt lay looſer, and the latter lay deeper: ſo that if you infuſe rhubarb for an hour, and cruſh it well, it will purge better, and bind the body leſs after the purging, than if it ſtood twenty four hours; this is tried: but I conceive likewiſe, that by repeating the

the infuſion of rhubarb, ſeveral times, (as was ſaid of violets,) letting each ſtay in but a ſmall time; you may make it as ſtrong a purging medicine, as ſcammony. And it is not a ſmall thing won in phyſick, if you can make rhubarb, and other medicines that are benedict, as ſtrong purgers, as thoſe that are not without ſome malignity.

20. PURGING medicines, for the moſt part, have their purgative virtue in a fine ſpirit; as appeareth by that they endure not boiling without much loſs of virtue. And therefore it is of good uſe in phyſick, if you can retain the purging virtue, and take away the unpleaſant taſte of the purger; which it is like you may do, by this courſe of infuſing oft, with little ſtay. For it is probable, that the horrible and odious taſte, is in the groſſer part.

21. GENERALLY, the working by infuſions, is groſs and blind, except you firſt try the iſſuing of the ſeveral parts of the body, which of them iſſue more ſpeedily, and which more ſlowly; and ſo by apportioning the time, can take and leave that quality, which you deſire. This to know, there are two ways; the one to try what long ſtay, and what ſhort ſtay worketh, as hath been ſaid: the other to try in order, the ſucceeding infuſions, of one and the ſame body, ſucceſſively in ſeveral liquors. As for example; take orange pills, or roſemary, or cinnamon, or what you will; and let them infuſe half an hour in water: then take them out, and infuſe them again in another water; and ſo the third time: and then taſte and conſider the firſt water, the ſecond, and the third: and you will find them differing, not only in ſtrength and weakneſs, but otherwiſe in taſte or odour; for it may be the firſt water will have more of the ſcent, as more fragrant; and the ſecond more of the taſte, as more bitter or biting, *&c.*

22. INFUSIONS in air, (for ſo we may well call odours) have the ſame diverſities with infuſions in water; in that the ſeveral odours (which are in one flower, or other body) iſſue at ſeveral times; ſome earlier, ſome later: ſo we find that violets, woodbines, ſtrawberries, yield a pleaſing ſcent, that cometh forth firſt; but ſoon after an ill ſcent quite differing from the former. Which is cauſed, not ſo much by mellowing, as by the late iſſuing of the groſſer ſpirit.

23. As we may deſire to extract the fineſt ſpirits in ſome caſes; ſo we may deſire alſo to diſcharge them (as hurtful) in ſome other. So wine burnt, by reaſon of the evaporating of the finer ſpirit, enflameth leſs, and is beſt in agues: opium loſeth ſome of his poiſonous quality, if it be vapoured out, mingled with ſpirit of wine, or the like: ſena loſeth ſomewhat of its windineſs by decocting; and (generally) ſubtile or windy ſpirits are taken off by incenſion, or evaporation. And even in infuſions in things that are of too high a ſpirit, you were better pour off the firſt infuſion, after a ſmall time, and uſe the later.

*Experiment ſolitary touching the appetite of continuation in liquids.*

24. BUBBLES are in the form of an hemiſphere; air within, and a little ſkin of water without: and it ſeemeth ſomewhat ſtrange, that the air ſhould riſe ſo ſwiftly, while it is in the water; and when it cometh to the top, ſhould be ſtayed by ſo weak a cover as that of the bubble is. But as for the ſwift aſcent of the air, while it is under the water, that is a motion of percuſſion from the water; which it ſelf deſcending, driveth up the air; and no motion of levity in the air. And this *Democritus* called *Motus Plagae.* In this common experiment, the cauſe of the encloſure of the bubble is, for that the appetite to reſiſt ſeparation, or diſcontinuance, (which in ſolid bodies

dies is ſtrong) is alſo in liquors, though fainter and weaker; as we ſee in this of the bubble: we ſee it alſo in little glaſſes of ſpittle that children make of ruſhes; and in caſtles of bubbles, which they make by blowing into water, having obtained a little degree of tenacity by mixture of ſoap: we ſee it alſo in the ſtillicides of water, which if there be water enough to ſollow, will draw themſelves into a ſmall thread, becauſe they will not diſcontinue; but if there be no remedy, then they caſt themſelves into round drops; which is the figure that ſaveth the body moſt from diſcontinuance: the ſame reaſon is of the roundneſs of the bubble, as well for the ſkin of water, as for the air within: for the air likewiſe avoideth diſcontinuance; and therefore caſteth it ſelf into a round figure. And for the ſtop and arreſt of the air a little while, it ſheweth that the air of it ſelf hath little or no appetite of aſcending.

*Experiment ſolitary touching the making of artificial ſprings.*

25. THE rejection, which I continually uſe, of experiments, (though it appeareth not) is infinite; but yet if an experiment be probable in the work, and of great uſe, I receive it, but deliver it as doubtful. It was reported by a ſober man, that an artificial ſpring may be made thus: find out a hanging ground, where there is a good quick fall of rain-water. Lay a half-trough of ſtone, of a good length, three or four foot deep within the ſame ground; with one end upon the high ground, the other upon the low. Cover the trough with brakes a good thickneſs, and caſt ſand upon the top of the brakes: you ſhall ſee, (ſaith he) that after ſome ſhowers are paſt, the lower end of the trough will run like a ſpring of water: which is no marvel, if it hold while the rain-water laſteth; but he ſaid it would continue long time after the rain is paſt: as if the water did multiply it ſelf upon the air, by the help of the coldneſs and condenſation of the earth, and the conſort of the firſt water.

*Experiment ſolitary touching the venomous quality of man's fleſh.*

26. THE *French*, (which put off the name of the *French* diſeaſe, unto the name of the diſeaſe of *Naples*,) do report, that at the ſiege of *Naples*, there were certain wicked merchants that barrelled up man's fleſh, (of ſome that had been lately ſlain in *Barbary*) and ſold it for tunney; and that upon that foul and high nouriſhment, was the original of that diſeaſe. Which may well be; for that it is certain, that the canibals in the *Weſt-Indies*, eat man's fleſh; and the *Weſt-Indies* were full of the pox when they were firſt diſcovered: and at this day the mortaleſt poiſons, practiſed by the *Weſt-Indians*, have ſome mixture of the blood, or fat, or fleſh of man: and divers witches, and ſorcereſſes, as well amongſt the heathen, as amongſt the chriſtians, have fed upon man's fleſh, to aid (as it ſeemeth) their imagination, with high and foul vapours.

*Experiment ſolitary touching the verſion and tranſmutation of air into water.*

27. IT ſeemeth that there be theſe ways (in likelihood) of verſion of vapours or air, into water and moiſture. The firſt is cold; which doth manifeſtly condenſe; as we ſee in the contracting of the air in the weather-glaſs; whereby it is a degree nearer to water. We ſee it alſo in the generation of ſprings, which the antients thought (very probably) to be made by the verſion of air into water, holpen by the reſt, which the air hath in thoſe parts; whereby it cannot diſſipate. And by the coldneſs of rocks; for there ſprings are chiefly generated. We ſee it alſo in the effects of the cold of the middle

region (as they call it) of the air; which produceth dews and rains. And the experiment of turning water into ice, by ſnow, nitre and ſalt, (whereof we ſhall ſpeak hereafter,) would be transferred to the turning of air into water. The ſecond way is by compreſſion; as in ſtillatories, where the vapour is turned back upon it ſelf, by the encounter of the ſides of the ſtillatory; and in the dew upon the covers of boiling pots; and in the dew towards rain, upon marble and wainſcot. But this is like to do no great effect; except it be upon vapours, and groſs air, that are already very near in degree to water. The third is that, which may be ſearched into, but doth not yet appear; which is, by mingling of moiſt vapours with air; and trying if they will not bring a return of more water, than the water was at firſt: for if ſo, that increaſe is a verſion of the air: therefore put water into the bottom of a ſtillatory, with the neb ſtopped; weigh the water firſt; hang in the middle of the ſtillatory a large ſponge; and ſee what quantity of water you can crüſh out of it; and what it is more, or leſs, compared with the water ſpent; for you muſt underſtand, that if any verſion can be wrought, it will be eaſilieſt done in ſmall pores: and that is the reaſon why we preſcribe a ſponge. The fourth way is probable alſo, though not appearing; which is, by receiving the air into the ſmall pores of bodies: for (as hath been ſaid) every thing in ſmall quantity is more eaſy for verſion; and tangible bodies have no pleaſure in the conſort of air, but endeavour to ſubact it into a more denſe body: but in entire bodies it is checked; becauſe if the air ſhould condenſe, there is nothing to ſucceed: therefore it muſt be in looſe bodies, as ſand, and powder; which we ſee, if they lie cloſe, of themſelves gather moiſture.

*Experiment ſolitary touching helps towards the beauty and good features of perſons.*

28. IT is reported by ſome of the ancients; that whelps, or other creatures, if they be put young into ſuch a cage or box, as they cannot riſe to their ſtature, but may increaſe in breadth or length, will grow accordingly, as they can get room: which if it be true and feiſible, and that the young creature ſo preſſed, and ſtraightened, doth not thereupon die; it is a means to produce dwarf creatures, and in a very ſtrange figure. This is certain, and noted long ſince; that the preſſure or forming of parts of creatures, when they are very young, doth alter the ſhape not a little; as the ſtroaking of the heads of infants, between the hands, was noted of old, to make *Macrocephali*; which ſhape of the head, at that time, was eſteemed. And the raiſing gently of the bridge of the noſe, doth prevent the deformity of a ſaddle noſe. Which obſervation well weighed, may teach a means, to make the perſons of men and women, in many kinds, more comely, and better featured, than otherwiſe they would be; by the forming and ſhaping of them in their infancy: as by ſtroaking up the calves of the legs, to keep them from falling down too low; and by ſtroaking up the forehead, to keep them from being low-foreheaded. And it is a common practice to ſwathe infants, that they may grow more ſtraight, and better ſhaped: and we ſee young women, by wearing ſtraight bodice, keep themſelves from being groſs and corpulent.

*Experiment ſolitary touching the condenſing of air in ſuch ſort as it may put on weight, and yield nouriſhment.*

29. ONIONS, as they hang, will many of them ſhoot forth; and ſo will penny-royal; and ſo will an herb called orpin; with which they uſe in the countrey,

countrey, to trim their houſes, binding it to a lath or ſtick, and ſetting it againſt a wall. We ſee it likewiſe, more eſpecially, in the greater ſemper-vive, which will put out branches, two or three years: but it is true, that commonly they wrap the root in a cloth beſmeared with oil, and renew it once in half a year. The like is reported by ſome of the ancients, of the ſtalks of lilies. The cauſe is; for that theſe plants have a ſtrong, denſe, and ſucculent moiſture, which is not apt to exhale; and ſo is able, from the old ſtore, without drawing help from the earth, to ſuffice the ſprouting of the plant: and this ſprouting is chiefly in the late ſpring, or early ſummer; which are the times of putting forth. We ſee alſo, that ſtumps of trees, lying out of the ground, will put forth ſprouts for a time. But it is a noble trial, and of very great conſequence, to try whether theſe things, in the ſprouting, do increaſe weight; which muſt be tried, by weighing them before they are hang'd up; and afterwards again, when they are ſprouted. For if they encreaſe not in weight; then it is no more but this; that what they ſend forth in the ſprout, they loſe in ſome other part: but if they gather weight, then it it *magnale naturae*; for it ſheweth that air may be made ſo to be condenſed, as to be converted into a denſe body; whereas the race and period of all things, here above the earth, is to extenuate and turn things to be more pneumatical and rare; and not to be retrograde, from pneumatical to that which is denſe. It ſheweth alſo, that air can nouriſh; which is another great matter of conſequence. Note, that to try this, the experiment of the ſemper-vive, muſt be made without oiling the cloth; for elſe, it may be, the plant receiveth nouriſhment from the oil.

*Experiment ſolitary touching the commixture of flame and air, and the great force thereof.*

30. FLAME and air do not mingle, except it be in an inſtant; or in the vital ſpirit of vegetables, and living creatures. In gun-powder, the force of it hath been aſcribed to rarefaction of the earthy ſubſtance into flame; and thus far it is true: and then (forſooth) it is become another element; the form whereof occupieth more place; and ſo, of neceſſity, followeth a dilatation: and therefore, leſt two bodies ſhould be in one place, there muſt needs alſo follow an expulſion of the pellet; or blowing up of the mine. But theſe are crude and ignorant ſpeculations. For flame, if there were nothing elſe, except it were in very great quantity, will be ſuffocated with any hard body, ſuch as a pellet is; or the barrel of a gun; ſo as the flame would not expel the hard body; but the hard body would kill the flame, and not ſuffer it to kindle, or ſpread. But the cauſe of this ſo potent a motion, is the nitre, (which we call otherwiſe ſalt-petre;) which having in it a notable crude and windy ſpirit, firſt by the heat of the fire ſuddenly dilateth it ſelf; (and we know that ſimple air, being preternaturally attenuated by heat, will make it ſelf room, and break, and blow up that which reſiſteth it;) and ſecondly, when the nitre hath dilated it ſelf, it bloweth abroad the flame, as an inward bellows. And therefore we ſee that brimſtone, pitch, camphire, wild-fire, and divers other inflammable matters, though they burn cruelly, and are hard to quench, yet they make no ſuch fiery wind, as gun-powder doth: and on the other ſide, we ſee that quick-ſilver, (which is a moſt crude and watry body) heated, and pent in, hath the like force with gun-powder. As for living creatures, it is certain, their vital ſpirits are a ſubſtance compounded of an airy and flamy matter; and though air and flame being free, will not well mingle; yet bound in by a body that hath ſome fixing, they will. For that you may

may beſt ſee in thoſe two bodies, (which are their aliments,) water and oil; for they likewiſe will not well mingle of themſelves; but in the bodies of plants, and living creatures, they will. It is no marvel therefore, that a ſmall quantity of ſpirits, in the cells of the brain and canals of the ſinews, are able to move the whole body, (which is of ſo great maſs,) both with ſo great force, as in wreſtling, leaping; and with ſo great ſwiftneſs, as in playing diviſion upon the lute. Such is the force of theſe two natures, air and flame, when they incorporate.

*Experiment ſolitary touching the ſecret nature of flame.*

31. TAKE a ſmall wax candle, and put it in a ſocket of braſs or iron; then ſet it upright in a porringer full of ſpirit of wine, heated: then ſet both the candle, and ſpirit of wine, on fire, and you ſhall ſee the flame of the candle open it ſelf, and become four or five times bigger than otherwiſe it would have been; and appear in figure globular, and not in pyramis. You ſhall ſee alſo, that the inward flame of the candle keepeth colour, and doth not wax any whit blue towards the colour of the outward flame of the ſpirit of wine. This is a noble inſtance; wherein two things are moſt remarkable: the one, that one flame within another quencheth not; but is a fixed body, and continueth as air and water do. And therefore flame would ſtill aſcend upwards in one greatneſs, if it were not quenched on the ſides: and the greater the flame is at the bottom, the higher is the riſe. The other, that flame doth not mingle with flame, as air doth with air, or water with water, but only remaineth contiguous; as it cometh to paſs betwixt conſiſting bodies. It appeareth alſo, that the form of a pyramis in flame, which we uſually ſee, is merely by accident, and that the air about, by quenching the ſides of the flame, cruſheth it, and extenuateth it into that form; for of it ſelf it would be round; and therefore ſmoak is in the figure of a pyramis reverſed; for the air quencheth the flame, and receiveth the ſmoak. Note alſo, that the flame of the candle, within the flame of the ſpirit of wine, is troubled; and doth not only open and move upwards, but moveth waving, and to and fro: as if flame of its own nature (if it were not quenched,) would roll and turn, as well as move upwards. By all which it ſhould ſeem, that the celeſtial bodies, (moſt of them,) are true fires or flames, as the Stoicks held; more fine (perhaps) and rarified, than our flame is. For they are all globular and determinate; they have rotation; and they have the colour and ſplendour of flame: ſo that flame above is durable, and conſiſtent, and in its natural place; but with us it is a ſtranger, and momentany, and impure; like *Vulcan* that halted with his fall.

*Experiment ſolitary touching the different force of flame in the midſt and on the ſides.*

32. TAKE an arrow, and hold it in flame, for the ſpace of ten pulſes, and when it cometh forth, you ſhall find thoſe parts of the arrow, which were on the outſides of the flame, more burned, blacked, and turned almoſt into a coal; whereas that in the midſt of the flame, will be, as if the fire had ſcarce touched it. This is an inſtance of great conſequence for the diſcovery of the nature of flame; and ſheweth manifeſtly, that flame burneth more violently towards the ſides, than in the midſt: and which is more, that heat or fire is not violent or furious, but where it is checked and pent. And therefore the Peripateticks (howſoever their opinion of an element of fire above the air is juſtly exploded;) in that point they acquit themſelves well:

for being oppoſed, that if there were a ſphere of fire, that encompaſſed the earth ſo near hand, it were impoſſible but all things ſhould be burnt up; they anſwer, that the pure elemental fire, in its own place, and not irritated, is but of a moderate heat.

*Experiment ſolitary touching the decreaſe of the natural motion of gravity in great diſtance from the earth; or within ſome depth of the earth.*

33. It is affirmed conſtantly by many, as an uſual experiment; that a lump of ore, in the bottom of a mine, will be tumbled and ſtirred by two mens ſtrength; which if you bring it to the top of the earth, will aſk ſix mens ſtrength at the leaſt to ſtir it. It is a noble inſtance, and is fit to be tried to the full: for it is very probable, that the motion of gravity worketh weakly, both far from the earth, and alſo within the earth: the former, becauſe the appetite of union of denſe bodies with the earth, in reſpect of the diſtance, is more dull; the latter, becauſe the body hath in part attained its nature, when it is ſome depth in the earth. For as for the moving to a point or place (which was the opinion of the ancients) it is a mere vanity.

*Experiment ſolitary touching the contraction of bodies in bulk, by the mixture of the more liquid body with the more ſolid.*

34. It is ſtrange, how the ancients took up experiments upon credit, and yet did build great matters upon them. The obſervation of ſome of the beſt of them, delivered confidently is, that a veſſel filled with aſhes, will receive the like quantity of water, that it would have done if it had been empty. But this is utterly untrue, for the water will not go in by a fifth part. And I ſuppoſe, that that fifth part is the difference of the lying cloſe, or open, of the aſhes; as we ſee that aſhes alone, if they be hard preſſed, will lie in leſs room: and ſo the aſhes with air between, lie looſer; and with water, cloſer. For I have not yet found certainly, that the water it ſelf, by mixture of aſhes, or duſt, will ſhrink or draw into leſs room.

*Experiment ſolitary touching the making vines more fruitful.*

35. It is reported of credit, that if you lay good ſtore of kernels of grapes about the root of a vine, it will make the vine come earlier and proſper better. It may be tried with other kernels, laid about the root of a plant of the ſame kind; as figs, kernels of apples, *&c.* The cauſe may be, for that the kernels draw out of the earth juice fit to nouriſh the tree, as thoſe that would be trees of themſelves, though there were no root; but the root being of greater ſtrength, robbeth and devoureth the nouriſhment, when they have drawn it: as great fiſhes devour little.

*Experiments in conſort touching purging medicines.*

36. The operation of purging medicines, and the cauſes thereof, have been thought to be a great ſecret; and ſo according to the ſlothful manner of men, it is referred to a hidden propriety, a ſpecifical virtue, and a fourth quality, and the like ſhifts of ignorance. The cauſes of purging are divers; all plain and perſpicuous; and throughly maintained by experience. The firſt is, that whatſoever cannot be overcome and digeſted by the ſtomach, is by the ſtomach either put up by vomit, or put down to the guts; and by that motion of expulſion in the ſtomach and guts, other parts of the body, (as the orifices of the veins, and the like) are moved to expel by conſent. For nothing is more frequent than motion of conſent in the body of man.

This

This ſurcharge of the ſtomach, is cauſed either by the quality of the medicine, or by the quantity. The qualities are three: extreme bitter, as in aloes, coloquintida, *&c.* loathſome and of horrible taſte, as in agarick, black hellebore, *&c.* and of ſecret malignity, and diſagreement towards man's body, many times not appearing much in the taſte; as in ſcammony, mechoachan, antimony, *&c.* And note well, that if there be any medicine that purgeth, and hath neither of the firſt two manifeſt qualities; it is to be held ſuſpected as a kind of poiſon; for that it worketh either by corroſion, or by a ſecret malignity, and enmity to nature: and therefore ſuch medicines are warily to be prepared and uſed. The quantity of that which is taken, doth alſo cauſe purging; as we ſee in a great quantity of new milk from the cow; yea and a great quantity of meat; for ſurfeits many times turn to purges, both upwards and downwards. Therefore we ſee generally, that the working of purging medicines cometh two or three hours after the medicines taken; for that the ſtomach firſt maketh a proof, whether it can concoct them. And the like happeneth after ſurfeits, or milk in too great quantity.

37. A ſecond cauſe is mordication of the orifices of the parts; eſpecially of the meſentery veins; as it is ſeen, that ſalt, or any ſuch thing that is ſharp and biting, put into the fundament, doth provoke the part to expel; and muſtard provoketh ſneezing: and any ſharp thing to the eyes provoketh tears. And therefore we ſee that almoſt all purgers have a kind of twitching and vellication, beſides the griping which cometh of wind. And if this mordication be in an over-high degree, it is little better than the corroſion of poiſon; as it cometh to paſs ſometimes in antimony, eſpecially if it be given to bodies not replete with humours; for where humours abound, the humours ſave the parts.

38. THE third cauſe is attraction: for I do not deny, but that purging medicines have in them a direct force of attraction; as drawing plaiſters have in ſurgery: and we ſee ſage, or betony bruiſed, ſneezing powder, and other powders or liquors (which the phyſicians call *errhines*,) put into the noſe, draw phlegm and water from the head; and ſo it is in apophlegmatiſms and gargariſms, that draw the rheum down by the palate. And by this virtue, no doubt, ſome purgers draw more one humour, and ſome another, according to the opinion received: as rhubarb draweth choler; ſena melancholy; agarick phlegm, *&c.* but yet (more or leſs) they draw promiſcuouſly. And note alſo, that beſides ſympathy between the purger and the humour, there is alſo another cauſe, why ſome medicines draw ſome humour more than another. And it is, for that ſome medicines work quicker than others: they that draw quick, draw only the lighter and more fluid humours; and they that draw ſlow, work upon the more tough and viſcous humours. And therefore men muſt beware how they take rhubarb, and the like, alone familiarly; for it taketh only the lighteſt part of the humour away, and leaveth the maſs of humours more obſtinate. And the like may be ſaid of wormwood, which is ſo much magnified.

39. THE fourth cauſe is flatuoſity; for wind ſtirred moveth to expel: and we find that (in effect) all purgers have in them a raw ſpirit, or wind; which is the principal cauſe of tortion in the ſtomach and belly. And therefore purgers loſe (moſt of them) the virtue, by decoction upon the fire; and for that cauſe are given chiefly in infuſion, juice, or powder.

40. THE fifth cauſe is compreſſion, or cruſhing: as when water is cruſhed out of a ſponge: ſo we ſee that taking cold moveth looſeneſs by contraction of the ſkin and outward parts; and ſo doth cold likewiſe cauſe rheums and

defluxions from the head; and ſome aſtringent plaiſters cruſh out purulent matter. This kind of operation is not found in many medicines: myrobalanes have it; and it may be the barks of peaches; for this virtue requireth an aſtriction; but ſuch an aſtriction as is not grateful to the body; (for a pleaſing aſtriction doth rather bind in the humours, then expel them:) and therefore ſuch aſtriction is found in things of an harſh taſte.

41. The ſixth cauſe is lubrefaction and relaxation. As we ſee in medicines emollient; ſuch as are milk, honey, mallows, lettice, mercurial, pellitory of the wall, and others. There is alſo a ſecret virtue of relaxation in cold: for the heat of the body bindeth the parts and humours together, which cold relaxeth: as it is ſeen in urine, blood, pottage, or the like; which, if they be cold, break and diſſolve. And by this kind of relaxation, fear looſeneth the belly; becauſe the heat retiring inwards towards the heart, the guts and other parts are relaxed; in the ſame manner as fear alſo cauſeth trembling in the ſinews. And of this kind of purgers are ſome medicines made of mercury.

42. The ſeventh cauſe is abſterſion; which is plainly a ſcouring off, or inciſion of the more viſcous humours, and making the humours more fluid; and cutting between them and the part: As is found in nitrous water, which ſcoureth linen cloth (ſpeedily) from the foulneſs. But this inciſion muſt be by a ſharpneſs, without aſtriction: which we find in ſalt, wormwood, oxymel, and the like.

43. There be medicines that move ſtools, and not urine; ſome other, urine, and not ſtools. Thoſe that purge by ſtool, are ſuch as enter not at all, or little into the meſentery veins; but either at the firſt are not digeſtible by the ſtomach, and therefore move immediately downwards to the guts; or elſe are afterwards rejected by the meſentery veins, and ſo turn likewiſe downwards to the guts; and of theſe two kinds are moſt purgers. But thoſe that move urine, are ſuch as are well digeſted of the ſtomach, and well received alſo of the meſentery veins; ſo they come as far as the liver, which ſendeth urine to the bladder, as the whey of blood: and thoſe medicines being opening and piercing, do fortify the operation of the liver, in ſending down the wheyey part of the blood to the reins. For medicines urinative do not work by rejection and indigeſtion, as ſolutive do.

44. There be divers medicines, which in greater quantity move ſtool, and in ſmaller, urine: and ſo contrariwiſe, ſome that in greater quantity, move urine, and in ſmaller, ſtool. Of the former ſort is rhubarb, and ſome others. The cauſe is, for that rhubarb is a medicine, which the ſtomach in a ſmall quantity doth digeſt and overcome, (being not flatuous nor loathſome;) and ſo ſendeth it to the meſentery veins; and ſo being opening, it helpeth down urine: but in a greater quantity, the ſtomach cannot overcome it, and ſo it goeth to the guts. Pepper by ſome of the ancients is noted to be of the ſecond ſort; which being in ſmall quantity, moveth wind in the ſtomach and guts, and ſo expelleth by ſtool; but being in greater quantity, diſſipateth the wind; and it ſelf getteth to the meſentery veins, and ſo to the liver and reins; where, by heating and opening, it ſendeth down urine more plentifully.

*Experiments in conſort touching meats and drinks that are moſt nouriſhing.*

45. We have ſpoken of evacuating of the body; we will now ſpeak ſomething of the filling of it by reſtoratives in conſumptions and emaciating diſeaſes. In vegetables, there is one part that is more nouriſhing than another; as grains and roots nouriſh more, than the leaves; in ſo much as the order of

of the folietanes was put down by the pope, as finding leaves unable to nourish man's body. Whether there be that difference in the flesh of living creatures, is not well inquired: as whether livers, and other entrails, be not more nourishing than the outward flesh. We find that amongst the *Romans*, a goose's liver was a great delicacy; insomuch as they had artificial means to make it fair and great; but whether it were more nourishing, appeareth not. It is certain, that marrow is more nourishing than fat. And I conceive that some decoction of bones and sinews, stamped and well strained, would be a very nourishing broth: We find also that *Scotch* skinck, (which is a pottage of strong nourishment) is made with the knees and sinews of beef, but long boiled: jelly also, which they use for a restorative, is chiefly made of knuckles of veal. The pulp that is within the crawfish or crab, which they spice and butter, is more nourishing than the flesh of the crab or crawfish. The yolks of eggs are clearly more nourishing than the whites. So that it should seem, that the parts of living creatures that lie more inwards, nourish more than the outward flesh; except it be the brain: which the spirits prey too much upon, to leave it any great virtue of nourishing. It seemeth for the nourishing of aged men, or men in consumptions, some such thing should be devised, as should be half *chylus*, before it be put into the stomach.

46. TAKE two large capons; parboil them upon a soft fire, by the space of an hour or more, till in effect all the blood be gone. Add in the decoction the pill of a sweet lemon, or a good part of the pill of a citron, and a little mace. Cut off the shanks, and throw them away. Then with a good strong chopping-knife, mince the two capons, bones and all, as small as ordinary minced meat; put them into a large neat boulter; then take a kilderkin, sweet, and well seasoned, of four gallons of beer, of 8 s. strength, new as it cometh from the tunning; make in the kilderkin a great bung-hole of purpose: then thrust into it the boulter (in which the capons are) drawn out in length; let it steep in it three days and three nights, the bung-hole open, to work; then close the bung-hole, and so let it continue a day and a half; then draw it into bottles, and you may drink it well after three days botteling; and it will last six weeks (approved). It drinketh fresh, flowreth and mantleth exceedingly; it drinketh not newish at all; it is an excellent drink for a consumption, to be drunk either alone, or carded with some other beer. It quencheth thirst, and hath no whit of windiness. Note, that it is not possible, that meat and bread, either in broths, or taken with drink, as is used, should get forth into the veins and outward parts, so finely and easily, as when it is thus incorporate, and made almost a *chylus* aforehand.

47. TRIAL would be made of the like brew with potado roots, or burr roots, or the pith of artichoaks, which are nourishing meats: it may be tried also with other flesh; as pheasant, partridge, young pork, pig, venison, especially of young deer, *&c.*

48. A mortress made with the brawn of capons, stamped, and strained, and mingled (after it is made) with like quantity (at the least) of almond butter, it is an excellent meat to nourish those that are weak; better than black-manger, or jelly: and so is the cullice of cocks, boiled thick with the like mixture of almond butter: for the mortress or cullice, of it self, is more savoury and strong, and not so fit for nourishing of weak bodies; but the almonds that are not of so high a taste as flesh, do excellently qualify it.

49. INDIAN maiz hath (of certain) an excellent spirit of nourishment; but

but it muſt be throughly boiled, and made into a maiz-cream like a barley-cream. I judge the ſame of rice, made into a cream; for rice is in *Turky*, and other countries of the eaſt, moſt fed upon; but it muſt be throughly boiled in reſpect of the hardneſs of it: and alſo becauſe otherwiſe it bindeth the body too much.

50. PISTACHOES, ſo they be good, and not muſty, joined with almonds in almond milk; or made into a milk of themſelves, like unto almond milk, but more green; are an excellent nouriſher: But you ſhall do well, to add a little ginger, ſcraped, becauſe they are not without ſome ſubtile windineſs.

51. MILK warm from the cow, is found to be a great nouriſher, and a good remedy in conſumptions: but then you muſt put into it, when you milk the cow, two little bags; the one of powder of mint, the other of powder of red roſes; for they keep the milk ſomewhat from turning, or curdling in the ſtomach; and put in ſugar alſo, for the ſame cauſe, and partly for the taſte's ſake; but you muſt drink a good draught, that it may ſtay leſs time in the ſtomach, leſt it curdle: and let the cup into which you milk the cow, be ſet in a greater cup of hot water, that you may take it warm. And cow milk thus prepared, I judge to be better for a conſumption, than aſs milk, which (it is true) turneth not ſo eaſily, but it is a little harſh; marry it is more proper for ſharpneſs of urine, and exulceration of the bladder, and all manner of lenifyings. Woman's milk likewiſe is preſcribed, when all fail; but I commend it not, as being a little too near the juice of man's body, to be a good nouriſher; except it be in infants, to whom it is natural.

52. OIL of ſweet almonds, newly drawn, with ſugar, and a little ſpice, ſpread upon bread toaſted, is an excellent nouriſher: but then to keep the oil from frying in the ſtomach, you muſt drink a good draught of mild beer after it; and to keep it from relaxing the ſtomach too much, you muſt put in a little powder of cinnamon.

53. THE yolks of eggs are of themſelves ſo well prepared by nature for nouriſhment; as (ſo they be poached, or rare boiled) they need no other preparation or mixture; yet they may be taken alſo raw, when they are new laid with malmſey, or ſweet wine; you ſhall do well to put in ſome few ſlices of eryngium roots, and a little ambergrice; for by this means, beſides the immediate faculty of nouriſhment, ſuch drink will ſtrengthen the back; ſo that it will not draw down the urine too faſt; for too much urine doth always hinder nouriſhment.

54. MINCING of meat, as in pies, and buttered minced meat, ſaveth the grinding of the teeth; and therefore (no doubt) it is more nouriſhing, eſpecially in age, or to them that have weak teeth; but the butter is not ſo proper for weak bodies; and therefore it were good to moiſten it with a little claret wine, pill of lemon, or orange, cut ſmall, ſugar, and a very little cinnamon, or nutmeg. As for chuets, which are likewiſe minced meat, inſtead of butter and fat, it were good to moiſten them, partly with cream, or almond, or piſtacho milk; or barley, or maiz cream; adding a little coriander ſeed and caraway ſeed, and a very little ſaffron. The more full handling of alimentation we reſerve to the due place.

WE have hitherto handled the particulars which yield beſt, and eaſieſt, and plentifulleſt nouriſhment; and now we will ſpeak of the beſt means of conveying and converting the nouriſhment.

55. THE firſt means is, to procure that the nouriſhment may not be rob-

bed and drawn away; wherein that which we have already ſaid is very material; to provide, that the reins draw not too ſtrongly an over-great part of the blood into urine. To this add that precept of *Ariſtotle*, that wine be forborn in all conſumptions; for that the ſpirits of the wine, do prey upon the roſcid juice of the body, and inter-common with the ſpirits of the body, and ſo deceive and rob them of their nouriſhment. And therefore if the conſumption growing from the weakneſs of the ſtomach, do force you to uſe wine; let it always be burnt; that the quicker ſpirits may evaporate; or at the leaſt quenched with two little wedges of gold, ſix or ſeven times repeated. Add alſo this proviſion, that there be not too much expence of the nouriſhment, by exhaling and ſweating: and therefore if the patient be apt to ſweat, it muſt be gently reſtrained. But chiefly *Hippocrates*'s rule is to be followed, who adviſeth quite contrary to that which is in uſe: Namely, that the linen, or garment next the fleſh, be in winter dry, and oft changed; and in ſummer ſeldom changed, and ſmeared over with oil; for certain it is, that any ſubſtance that is fat, doth a little fill the pores of the body, and ſtay ſweat, in ſome degree: But the more cleanly way is, to have the linen ſmeared lightly over with oil of ſweet almonds; and not to forbear ſhifting as oft as is fit.

56. THE ſecond means is, to ſend forth the nouriſhment into the parts more ſtrongly; for which the working muſt be by ſtrengthening of the ſtomach; and in this, becauſe the ſtomach is chiefly comforted by wine and hot things, which otherwiſe hurt; it is good to reſort to outward applications to the ſtomach: Wherein it hath been tried, that the quilts of roſes, ſpices, maſtick, wormwood, mint, *&c.* are nothing ſo helpful, as to take a cake of new bread, and to bedew it with a little ſack, or alicant; and to dry it; and after it be dried a little before the fire, to put it within a clean napkin, and to lay it to the ſtomach; for it is certain, that all flower hath a potent virtue of aſtriction; in ſo much as it hardeneth a piece of fleſh, or a flower, that is laid in it: and therefore a bag quilted with bran, is likewiſe very good; but it drieth ſomewhat too much, and therefore it muſt not lie long.

57. THE third means (which may be a branch of the former) is to ſend forth the nouriſhment the better by ſleep. For we ſee, that bears, and other creatures that ſleep in the winter, wax exceeding fat: and certain it is (as it is commonly believed) that ſleep doth nouriſh much; both for that the ſpirits do leſs ſpend the nouriſhment in ſleep, than when living creatures are awake: and becauſe (that which is to the preſent purpoſe) it helpeth to thruſt out the nouriſhment into the parts. Therefore in aged men, and weak bodies, and ſuch as abound not with choler, a ſhort ſleep after dinner doth help to nouriſh; for in ſuch bodies there is no fear of an over-haſty digeſtion, which is the inconvenience of poſtmeridian ſleeps. Sleep alſo in the morning, after the taking of ſomewhat of eaſy digeſtion; as milk from the cow, nouriſhing broth, or the like, doth further nouriſhment: but this would be done ſitting upright, that the milk or broth may paſs the more ſpeedily to the bottom of the ſtomach.

58. THE fourth means is to provide that the parts themſelves may draw to them the nouriſhment ſtrongly. There is an excellent obſervation of *Ariſtotle*; that a great reaſon, why plants (ſome of them) are of greater age than living creatures, is, for that they yearly put forth new leaves and boughs; whereas living creatures put forth (after their period of growth) nothing that is young, but hair and nails, which are excrements, and no parts. And

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it is moſt certain, that whatſoever is young, doth draw nouriſhment better than that which is old: and then (that which is the myſtery of that obſervation) young boughs, and leaves, calling the ſap up to them; the ſame nouriſheth the body in the paſſage. And this we ſee notably proved alſo, in that the oft cutting, or polling of hedges, trees, and herbs, doth conduce much to their laſting. Transfer therefore this obſervation to the helping of nouriſhment in living creatures: the nobleſt and principal uſe whereof is, for the prolongation of life; reſtauration of ſome degree of youth, and inteneration of the parts: for certain it is, that there are in living creatures parts that nouriſh and repair eaſily, and parts that nouriſh and repair hardly: and you muſt refreſh and renew thoſe that are eaſy to nouriſh, that the other may be refreſhed, and (as it were) drink in nouriſhment in the paſſage. Now we ſee that draught oxen, put into a good paſture, recover the fleſh of young beef; and men after long emaciating diets wax plump and fat, and almoſt new: ſo that you may ſurely conclude, that the frequent and wiſe uſe of thoſe emaciating diets, and of purgings, and perhaps of ſome kind of bleeding, is a principal means of prolongation of life, and reſtoring ſome degree of youth: for as we have often ſaid, death cometh upon living creatures like the torment of *Mezentius:*

*Mortua quinetiam jungebat corpora vivis,*
*Componens manibuſque manus, atque oribus ora.* Æn. 8. v. 485.

For the parts in man's body eaſily reparable, (as ſpirits, blood and fleſh) die in the embracement of the parts hardly reparable, (as bones, nerves, and membranes;) and likewiſe ſome entrails (which they reckon amongſt the ſpermatical parts) are hard to repair: though that diviſion of ſpermatical and menſtrual parts be but a conceit. And this ſame obſervation alſo may be drawn to the preſent purpoſe of nouriſhing emaciated bodies: and therefore gentle frication draweth forth the nouriſhment, by making the parts a little hungry, and heating them; whereby they call forth nouriſhment the better. This frication I wiſh to be done in the morning. It is alſo beſt done by the hand, or a piece of ſcarlet wooll, wet a little with oil of almonds, mingled with a ſmall quantity of bay-ſalt, or ſaffron; we ſee that the very currying of horſes doth make them fat, and in good liking.

59. THE fifth means is, to further the very act of aſſimilation of nouriſhment; which is done by ſome outward emollients, that make the parts more apt to aſſimilate. For which I have compounded an ointment of excellent odour, which I call *Roman* ointment; *vide* the receipt. The uſe of it would be between ſleeps; for in the latter ſleep the parts aſſimilate chiefly.

*Experiments ſolitary touching* Filum medicinale.

60. THERE be many medicines, which by themſelves would do no cure, but perhaps hurt; but being applied in a certain order, one after another, do great cures. I have tried (myſelf) a remedy for the gout, which hath ſeldom failed, but driven it away in twenty four hours ſpace: it is firſt to apply a poultis, of which *vide* the receipt; and then a bath or fomentation, of which *vide* the receipt; and then a plaiſter, *vide* the receipt. The poultis relaxeth the pores, and maketh the humour apt to exhale. The fomentation calleth forth the humour by vapours; but yet in regard of the way made by the poultis, draweth gently; and therefore draweth the humours out, and doth not draw more to it; for it is a gentle fomentation, and hath withal a mixture (though very little) of ſome ſtupefactive. The plaiſter is a moderate

moderate aſtringent plaiſter, which repelleth new humour from falling. The poultis alone would make the part more ſoft and weak, and apter to take the defluxion and impreſſion of the humour. The fomentation alone, if it were too weak, without way made by the poultis, would draw forth little; if too ſtrong, it would draw to the part, as well as draw from it. The plaiſter alone would pen the humour already contained in the part, and ſo exaſperate it, as well as forbid new humour. Therefore they muſt be all taken in order, as is ſaid. The poultis is to be laid to for two or three hours: the fomentation for a quarter of an hour, or ſomewhat better, being uſed hot, and ſeven or eight times repeated: the plaiſter to continue on ſtill, till the part be well confirmed.

*Experiments ſolitary touching cure by cuſtom.*

61. THERE is a ſecret way of cure, (unpractiſed) by aſſuetude of that which in it ſelf hurteth. Poiſons have been made, by ſome, familiar, as hath been ſaid. Ordinary keepers of the ſick of the plague, are ſeldom infected. Enduring of tortures, by cuſtom, hath been made more eaſy: the brooking of enormous quantity of meats, and ſo of wine or ſtrong drink, hath been, by cuſtom, made to be without ſurfeit or drunkenneſs. And generally diſeaſes that are chronical, as coughs, phthiſicks, ſome kinds of palſies, lunacies, *&c.* are moſt dangerous at the firſt: therefore a wiſe phyſician will conſider whether a diſeaſe be incurable; or whether the juſt cure of it be not full of peril; and if he find it to be ſuch, let him reſort to palliation; and alleviate the ſymptom, without buſying himſelf too much with the perfect cure: and many times (if the patient be indeed patient) that courſe will exceed all expectation. Likewiſe the patient himſelf may ſtrive, by little and little, to overcome the ſymptom in the exacerbation, and ſo, by time, turn ſuffering into nature.

*Experiment ſolitary touching cure by exceſs.*

62. DIVERS diſeaſes, eſpecially chronical, (ſuch as quartan agues) are ſometimes cured by ſurfeit and exceſſes: as exceſs of meat, exceſs of drink, extraordinary faſting, extraordinary ſtirring or laſſitude, and the like. The cauſe is, for that diſeaſes of continuance get an adventitious ſtrength from cuſtom, beſides their material cauſe from the humours: ſo that the breaking of the cuſtom doth leave them only to their firſt cauſe; which if it be any thing weak will fall off. Beſides, ſuch exceſſes do excite and ſpur nature, which thereupon riſes more forcibly againſt the diſeaſe.

*Experiment ſolitary touching cure by motion of conſent.*

63. THERE is in the body of man a great conſent in the motion of the ſeveral parts. We ſee, it is children's ſport, to prove whether they can rub upon their breaſt with one hand, and pat upon their forehead with another; and ſtraightways they ſhall ſometimes rub with both hands, or pat with both hands. We ſee, that when the ſpirits that come to the noſtrils, expel a bad ſcent, the ſtomach is ready to expel by vomit. We find that in conſumptions of the lungs, when nature cannot expel by cough, men fall into fluxes of the belly, and then they die. So in peſtilent diſeaſes, if they cannot be expelled by ſweat, they fall likewiſe into looſeneſs; and that is commonly mortal. Therefore phyſicians ſhould ingeniouſly contrive, how by motions that are in their power, they may excite inward motions that are not in their power, by conſent: as by the ſtench of feathers, or the like, they cure the riſing of the mother.

*Experiment ſolitary touching cure of diſeaſes, which are contrary to prediſpoſition.*

64. HIPPOCRATES aphoriſm, in *morbis minus*, is a good profound aphoriſm. It importeth, that diſeaſes, contrary to the complexion, age, ſex, ſeaſon of the year, diet, *&c.* are more dangerous than thoſe that are concurrent. A man would think it ſhould be otherwiſe; for that, when the accident of ſickneſs, and the natural diſpoſition, do ſecond the one the other, the diſeaſe ſhould be more forcible: and ſo (no doubt) it is; if you ſuppoſe like quantity of matter. But that which maketh good the aphoriſm, is, becauſe ſuch diſeaſes do ſhew a greater collection of matter, by that they are able to overcome thoſe natural inclinations to the contrary. And therefore in diſeaſes of that kind, let the phyſician apply himſelf more to purgation, than to alteration; becauſe the offence is in the quantity; and the qualities are rectified of themſelves.

*Experiment ſolitary touching preparations before purging, and ſettling of the body afterward.*

65. PHYSICIANS do wiſely preſcribe, that there be preparatives uſed before juſt purgations; for certain it is, that purgers do many times great hurt, if the body be not accommodated, both before and after the purging. The hurt that they do, for want of preparation before purging, is by the ſticking of the humours, and their not coming fair away; which cauſeth in the body great perturbations, and ill accidents, during the purging; and alſo the diminiſhing and dulling of the working of the medicine it ſelf, that it purgeth not ſufficiently; therefore the work of preparation is double; to make the humours fluid and mature, and to make the paſſages more open: for both thoſe help to make the humours paſs readily. And for the former of theſe, ſyrups are moſt profitable; and for the latter, apozemes, or preparing broths; clyſters alſo help leſt the medicine ſtop in the guts, and work gripingly. But it is true, that bodies abounding with humours, and fat bodies, and open weather, are preparatives in themſelves; becauſe they make the humours more fluid. But let a phyſician beware, how he purge after hard froſty weather, and in a lean body, without preparation. For the hurt that they may do after purging, it is cauſed by the lodging of ſome humours in ill places: for it is certain, that there be humours, which ſomewhere placed in the body, are quiet, and do little hurt; in other places, (eſpecially paſſages) do much miſchief. Therefore it is good, after purging, to uſe apozemes and broths, not ſo much opening as thoſe uſed before purging; but abſterſive and mundifying clyſters alſo are good to conclude with, to draw away the reliques of the humours, that may have deſcended to the lower region of the body.

*Experiment ſolitary touching ſtanching of blood.*

66. BLOOD is ſtanched divers ways. Firſt by aſtringents, and repercuſſive medicines. Secondly by drawing of the ſpirits and blood inwards; which is done by cold; as iron or a ſtone laid to the neck, doth ſtanch the bleeding at the noſe; alſo it hath been tried, that the teſticles being put into ſharp vinegar, hath made a ſudden receſs of the ſpirits, and ſtanched blood. Thirdly by the receſs of the blood by ſympathy. So it hath been tried, that the part that bleedeth, being thruſt into the body of a capon, or ſheep, new ript and bleeding, hath ſtanched blood; the blood, as it ſeemeth, ſucking and

drawing

drawing up, by ſimilitude of ſubſtance, the blood it meeteth with, and ſo it ſelf going back. Fourthly by cuſtom and time; ſo the Prince of *Orange*, in his firſt hurt, by the *Spaniſh* boy, could find no means to ſtanch the blood, either by medicine or ligament; but was fain to have the orifice of the wound ſtopped by mens thumbs, ſucceeding one another, for the ſpace at the leaſt of two days; and at the laſt the blood by cuſtom only retired. There is a fifth way alſo in uſe, to let blood in an adverſe part, for a revulſion.

*Experiment ſolitary touching change of aliments and medicines.*

67. IT helpeth, both in medicine and aliment, to change and not to continue the ſame medicine and aliment ſtill. The cauſe is, for that nature by continual uſe of any thing, groweth to a ſatiety and dulneſs, either of appetite or working. And we ſee that aſſuetude of things hurtful, doth make them loſe their force to hurt; as poiſon, which with uſe ſome have brought themſelves to brook. And therefore it is no marvel, though things helpful by cuſtom loſe their force to help: I count intermiſſion almoſt in the ſame thing with change; for that, that hath been intermitted, is after a ſort new.

*Experiment ſolitary touching diets.*

68. IT is found by experience, that in diets of guaiacum, ſarza, and the like, (eſpecially if they be ſtrict) the patient is more troubled in the beginning, than after continuance; which hath made ſome of the more delicate ſort of patients give them over in the midſt; ſuppoſing that if thoſe diets trouble them ſo much at firſt, they ſhall not be able to endure them to the end. But the cauſe is, for that all thoſe diets do dry up humours, rheums, and the like; and they cannot dry up until they have firſt attenuated; and while the humour is attenuated, it is more fluid than it was before, and troubleth the body a great deal more, until it be dried up and conſumed. And therefore patients muſt expect a due time, and not keck at them at the firſt.

*Experiments in conſort touching the production of cold.*

69. THE producing of cold is a thing very worthy the inquiſition; both for the uſe and diſcloſure of cauſes. For heat and cold are nature's two hands, whereby ſhe chiefly worketh: and heat we have in readineſs, in reſpect of the fire; but for cold we muſt ſtay till it cometh, or ſeek it in deep caves, or high mountains: and when all is done, we cannot obtain it in any great degree: for furnaces of fire are far hotter than a ſummer's ſun; but vaults or hills are not much colder than a winter's froſt.

THE firſt means of producing cold, is that which nature preſenteth us withal; namely, the expiring of cold out of the inward parts of the earth in winter, when the ſun hath no power to overcome it; the earth being (as hath been noted by ſome) *primum frigidum*. This hath been aſſerted, as well by ancient, as by modern philoſophers: it was the tenet of *Parmenides*. It was the opinion of the author of the diſcourſe in *Plutarch*, (for I take it, that book was not *Plutarch*'s own) *de primo frigido*. It was the opinion of *Teleſius*, who hath renewed the philoſophy of *Parmenides*, and is the beſt of the noveliſts.

70. THE ſecond cauſe of cold is the contact of cold bodies; for cold is active and tranſitive into bodies adjacent, as well as heat: which is ſeen in thoſe things that are touched with ſnow or cold water. And therefore, whoſoever will be an inquirer into nature, let him reſort to a conſervatory of ſnow and

ice; ſuch as they uſe for delicacy, to cool wine in ſummer: which is a poor and contemptible uſe, in reſpect of other uſes, that may be made of ſuch conſervatories.

71. THE third cauſe is the primary nature of all tangible bodies: for it is well to be noted, that all things whatſoever (tangible) are of themſelves cold; except they have an acceſſory heat by fire, life, or motion: For even the ſpirit of wine, or chymical oils, which are ſo hot in operation, are to the firſt touch cold; and air it ſelf compreſſed, and condenſed a little by blowing, is cold.

72. THE fourth cauſe is the denſity of the body; for all denſe bodies are colder than moſt other bodies, as metals, ſtone, glaſs; and they are longer in heating than ſofter bodies. And it is certain, that earth, denſe, tangible, hold all of the nature of cold. The cauſe is, for that all matters tangible being cold, it muſt needs follow, that where the matter is moſt congregate, the cold is the greater.

73. THE fifth cauſe of cold, or rather of increaſe and vehemency of cold, is a quick ſpirit incloſed in a cold body: as will appear to any that ſhall attentively conſider of nature in many inſtances. We ſee nitre (which hath a quick ſpirit) is cold; more cold to the tongue than a ſtone; ſo water is colder than oil, becauſe it hath a quicker ſpirit; for all oil, though it hath the tangible parts better digeſted than water, yet hath it a duller ſpirit: ſo ſnow is colder than water, becauſe it hath more ſpirit within it: ſo we ſee that ſalt put to ice (as in the producing of the artificial ice) increaſeth the activity of cold: ſo ſome *inſecta* which have ſpirit of life, as ſnakes and ſilk-worms, are to the touch cold. So quickſilver is the coldeſt of metals, becauſe it is fulleſt of ſpirit.

74. THE ſixth cauſe of cold is the chaſing and driving away of ſpirits, ſuch as have ſome degree of heat: for the baniſhing of the heat muſt needs leave any body cold. This we ſee in the operation of opium, and ſtupefactives, upon the ſpirits of living creatures: and it were not amiſs to try opium, by laying it upon the top of a weather-glaſs, to ſee whether it will contract the air: but I doubt it will not ſucceed; for beſides that the virtue of opium will hardly penetrate through ſuch a body as glaſs, I conceive that opium, and the like, make the ſpirits fly rather by malignity, than by cold.

75. SEVENTHLY, the ſame effect muſt follow upon the exhaling or drawing out of the warm ſpirits, that doth upon the flight of the ſpirits. There is an opinion, that the moon is magnetical of heat, as the ſun is of cold and moiſture: it were not amiſs therefore to try it, with warm waters; the one expoſed to the beams of the moon, the other with ſome ſkreen betwixt the beams of the moon and the water; as we uſe to the ſun for ſhade; and to ſee whether the former will cool ſooner. And it were alſo good to inquire, what other means there may be, to draw forth the exile heat, which is in the air; for that may be a ſecret of great power to produce cold weather.

*Experiments in conſort touching the verſion and tranſmutation of air into water.*

WE have formerly ſet down the means of turning air into water, in the experiment 27. But becauſe it is *magnale naturae*, and tendeth to the ſubduing of a very great effect, and is alſo of manifold uſe, we will add ſome inſtances in conſort that give light thereunto.

76. IT is reported by ſome of the ancients, that ſailors have uſed, every night, to hang fleeces of wool on the ſides of their ſhips, the wool towards the water; and that they have cruſhed freſh water out of them, in the morning, for their uſe. And thus much we have tried, that a quantity of wool tied looſe together, being let down into a deep well, and hanging in the middle, ſome three fathom from the water, for a night, in the winter-time; increaſed in weight (as I now remember) to a fifth part.

77. IT is reported by one of the ancients, that in *Lydia*, near *Pergamus*, there were certain workmen, in time of wars fled into caves; and the mouth of the caves being ſtopped by the enemies, they were famiſhed. But long time after the dead bones were found; and ſome veſſels which they had carried with them; and the veſſels full of water; and that water thicker, and more towards ice, than common water: which is a notable inſtance of condenſation and induration by burial under earth, (in caves) for a long time; and of verſion alſo (as it ſhould ſeem) of air into water; if any of thoſe veſſels were empty. Try therefore a ſmall bladder hung in ſnow, and the like in nitre, and the like in quickſilver: and if you find the bladders fallen or ſhrunk, you may be ſure the air is condenſed by the cold of thoſe bodies, as it would be in a cave under earth.

78. IT is reported of very good credit, that in the *Eaſt-Indies*, if you ſet a tub of water open in a room where cloves are kept, it will be drawn dry in twenty four hours; though it ſtand at ſome diſtance from the cloves. In the countrey, they uſe many times, in deceit, when their wool is new ſhorn, to ſet ſome pails of water by in the ſame room, to increaſe the weight of the wool. But it may be, that the heat of the wool, remaining from the body of the ſheep, or the heat gathered by the lying cloſe of the wool, helpeth to draw the watry vapour; but that is nothing to the verſion.

79. IT is reported alſo credibly, that wool new ſhorn, being laid caſually upon a veſſel of verjuice, after ſome time, had drunk up a great part of the verjuice, though the veſſel were whole without any flaw, and had not the bung-hole open. In this inſtance, there is (upon the by) to be noted, the percolation or ſuing of the verjuice through the wood; for verjuice of it ſelf would never have paſſed through the wood: ſo as, it ſeemeth, it muſt be firſt in a kind of vapour, before it paſs.

80. IT is eſpecially to be noted, that the cauſe that doth facilitate the verſion of air into water, when the air is not in groſs but ſubtilly mingled with tangible bodies, is, (as hath been partly touched before) for that tangible bodies have an antipathy with air; and if they find any liquid body that is more denſe near them, they will draw it: and after they have drawn it, they will condenſe it more, and in effect incorporate it; for we ſee that a ſponge, or wool, or ſugar, or a woollen cloth, being put but in part in water, or wine, will draw the liquor higher, and beyond the place: where the water or wine cometh. We ſee alſo, that wood, lute-ſtrings, and the like, do ſwell in moiſt ſeaſons: as appeareth by the breaking of the ſtrings, the hard turning of the pegs, and the hard drawing forth of boxes, and opening of wainſcot doors; which is a kind of infuſion: and is much like to an infuſion in water, which will make wood to ſwell: as we ſee in the filling of the chops of bowles, by laying them in water. But for that part of theſe experiments which concerneth attraction, we will reſerve it to the proper title of attraction.

81. THERE is alſo a verſion of air into water ſeen in the ſweating of marbles and other ſtones; and of wainſcot before and in moiſt weather. This muſt be, either by ſome moiſture the body yieldeth; or elſe by the moiſt air thickned

thickned againſt the hard body. But it is plain, that it is the latter; for that we ſee wood painted with oil colour, will ſooner gather drops in a moiſt night, than wood alone; which is cauſed by the ſmoothneſs and cloſeneſs; which letteth in no part of the vapour, and ſo turneth it back, and thickeneth it into dew. We ſee alſo, that breathing upon a glaſs, or ſmooth body, giveth a dew; and in froſty mornings (ſuch as we call rime froſts) you ſhall find drops of dew upon the inſide of glaſs windows; and the froſt it ſelf upon the ground, is but a verſion or condenſation, of the moiſt vapours of the night, into a watry ſubſtance: dews likewiſe and rain, are but the returns of moiſt vapours condenſed; the dew, by the cold only of the ſun's departure, which is the gentler cold; rains, by the cold of that which they call the middle region of the air; which is the more violent cold.

82. IT is very probable (as hath been touched) that that which will turn water into ice, will likewiſe turn air ſome degree nearer unto water. Therefore try the experiment of the artificial turning water into ice (whereof we ſhall ſpeak in another place) with air in place of water, and the ice about it. And although it be a greater alteration to turn air into water, than water into ice; yet there is this hope, that by continuing the air longer time, the effect will follow: for that artificial converſion of water into ice, is the work of a few hours; and this of air may be tried by a month's ſpace, or the like.

*Experiments in conſort touching induration of bodies.*

INDURATION, or lapidification of ſubſtances more ſoft, is likewiſe another degree of condenſation; and is a great alteration in nature. The effecting and accelerating thereof is very worthy to be inquired. It is effected by three means. The firſt is by cold; whoſe property is to condenſe and conſtipate, as hath been ſaid. The ſecond is by heat; which is not proper but by conſequence; for the heat doth attenuate; and by attenuation doth ſend forth the ſpirit and moiſter part of a body; and upon that, the more groſs of the tangible parts do contract and ſerre themſelves together; both to avoid *vacuum* (as they call it) and alſo to munite themſelves againſt the force of the fire, which they have ſuffered. And the third is by aſſimilation; when a hard body aſſimilateth a ſoft, being contiguous to it.

THE examples of induration, taking them promiſcuouſly, are many: as the generation of ſtones within the earth, which at the firſt are but rude earth or clay: and ſo of minerals, which come (no doubt) at firſt of juices concrete, which afterward indurate: and ſo of porcellane, which is an artificial cement, buried in the earth a long time; and ſo the making of brick and tile: alſo the making of glaſs of a certain ſand and brake-roots, and ſome others matters: alſo the exudations of rock-diamonds and cryſtal, which harden with time: alſo the induration of bead-amber, which at firſt is a ſoft ſubſtance; as appeareth by the flies and ſpiders which are found in it; and many more: but we will ſpeak of them diſtinctly.

83. FOR indurations by cold, there be few trials of it; for we have no ſtrong or intenſe cold here on the ſurface of the earth, ſo near the beams of the ſun, and the heavens. The likelieſt trial is by ſnow and ice; for as ſnow and ice, eſpecially being holpen and their cold activated by nitre or ſalt, will turn water into ice, and that in a few hours; ſo it may be, it will turn wood or ſtiff clay into ſtone, in longer time. Put therefore, into a conſerving pit of ſnow and ice, (adding ſome quantity of ſalt and nitre) a piece of wood, or a piece of tough clay, and let it lie a month or more.

84. ANOTHER trial is by metalline waters, which have virtual cold in them.

them. Put therefore wood or clay into ſmiths water, or other metalline water, and try whether it will not harden in ſome reaſonable time. But I underſtand it of metalline waters, that come by waſhing or quenching; and not of ſtrong waters that come by diſſolution; for they are too corroſive to conſolidate.

85. IT is already found, that there are ſome natural ſpring-waters, that will inlapidate wood; ſo that you ſhall ſee one piece of wood, whereof the part above the water ſhall continue wood; and the part under the water ſhall be turned into a kind of gravelly ſtone. It is likely thoſe waters are of ſome metalline mixture; but there would be more particular inquiry made of them. It is certain, that an egg was found, having lain many years in the bottom of a moat, where the earth had ſomewhat overgrown it; and this egg was come to the hardneſs of a ſtone; and had the colours of the white and yolk perfect: and the ſhell ſhining in ſmall grains like ſugar, or alabaſter.

86. ANOTHER experience there is of induration by cold, which is already found; which is, that metals themſelves are hardened by often heating and quenching in cold water: for cold ever worketh moſt potently upon heat precedent.

87. FOR induration by heat, it muſt be conſidered, that heat, by the exhaling of the moiſter parts, doth either harden the body, as in bricks, tiles, *&c.* or if the heat be more fierce, maketh the groſſer part it ſelf run and melt; as in the making of ordinary glaſs; and in the vitrification of earth, (as we ſee in the inner parts of furnaces;) and in the vitrification of brick, and of metals. And in the former of theſe, which is the hardening by baking without melting, the heat hath theſe degrees; firſt, it indurateth; and then maketh fragile; and laſtly it doth incinerate and calcinate.

88. BUT if you deſire to make an induration with toughneſs, and leſs fragility, a middle way would be taken; which is that which *Ariſtotle* hath well noted; but would be throughly verified. It is to decoct bodies in water for two or three days; but they muſt be ſuch bodies into which the water will not enter; as ſtone and metal: For if they be bodies, into which the water will enter, then long ſeething will rather ſoften than indurate them; as hath been tried in eggs, *&c.* therefore ſofter bodies muſt be put into bottles; and the bottles hung into water ſeething, with the mouths open above the water, that no water may get in; for by this means the virtual heat of the water will enter; and ſuch a heat, as will not make the body aduſt, or fragile; but the ſubſtance of the water will be ſhut out. This experiment we made; and it ſorted thus. It was tried with a piece of free-ſtone, and with pewter, put into the water at large. The free-ſtone we found received in ſome water; for it was ſofter and eaſier to ſcrape, than a piece of the ſame ſtone kept dry. But the pewter into which no water could enter, became more white, and liker to ſilver, and leſs flexible, by much. There were alſo put into an earthen bottle, placed as before, a good pellet of clay, a piece of cheeſe, a piece of chalk, and a piece of free-ſtone. The clay came forth almoſt of the hardneſs of a ſtone; the cheeſe likewiſe very hard, and not well to be cut: the chalk and the free-ſtone much harder than they were. The colour of the clay inclined not a whit to the colour of brick, but rather to white, as in ordinary drying by the ſun. Note, that all the former trials were made by a boiling upon a good hot fire, renewing the water as it conſumed, with other hot water; but the boiling was but for twelve hours only; and it is like that the experiment would have been more

effectual,

effectual, if the boiling had been for two or three days, as we prescribed before.

89. As touching assimilation, (for there is a degree of assimilation even in inanimate bodies) we see examples of it in some stones in clay-grounds, lying near to the top of the earth, where pebble is; in which you may manifestly see divers pebbles gathered together, and a crust of cement or stone between them, as hard as the pebbles themselves: and it were good to make a trial of purpose, by taking clay, and putting in it divers pebble stones, thick set, to see whether in continuance of time, it will not be harder than other clay of the same lump, in which no pebbles are set. We see also in ruins of old walls, especially towards the bottom, the mortar will become as hard as the brick: we see also, that the wood on the sides of vessels of wine, gathereth a crust of tartar, harder than the wood it self; and scales likewise grow to the teeth, harder than the teeth themselves.

90. MOST of all, induration by assimilation appeareth in the bodies of trees and living creatures: for no nourishment that the tree receiveth, or that the living creature receiveth, is so hard as wood, bone, or horn, *&c.* but is indurated after by assimilation.

*Experiment solitary touching the version of water into air.*

91. THE eye of the understanding, is like the eye of the sense: for as you may see great objects through small crannies, or levels; so you may see great axioms of nature, through small and contemptible instances. The speedy depredation of air upon watry moisture, and version of the same into air, appeareth in nothing more visible, than in the sudden discharge, or vanishing, of a little cloud of breath, or vapour, from glass, or the blade of a sword, or any such polished body; such as doth not at all detain or imbibe the moisture; for the mistiness scattereth and breaketh up suddenly. But the like cloud, if it were oily or fatty, will not discharge; not because it sticketh faster; but because air preyeth upon water; and flame, and fire, upon oil; and therefore, to take out a spot of grease, they use a coal upon brown paper; because fire worketh upon grease, or oil, as air doth upon water. And we see paper oiled, or wood oiled, or the like, last long moist; but wet with water, dry or putrify sooner. The cause is, for that air meddleth little with the moisture of oil.

*Experiment solitary touching the force of union.*

92. THERE is an admirable demonstration in the same trifling instance of the little cloud upon glass, or gems, or blades of swords, of the force of union, even in the least quantities, and weakest bodies, how much it conduceth to preservation of the present form, and the resisting of a new. For mark well the discharge of that cloud; and you shall see it ever break up, first in the skirts, and last in the midst. We see likewise, that much water draweth forth the juice of the body infused; but little water is imbibed by the body: and this is a principal cause, why in operation upon bodies for their version or alteration, the trial in great quantities doth not answer the trial in small; and so deceiveth many; for that (I say) the greater body resisteth more any alteration of form, and requireth far greater strength in the active body, that should subdue it.

*Experiment solitary touching the producing of feathers and hairs of divers colours.*

93. WE have spoken before, in the fifth instance, of the cause of orient colours in birds; which is by the fineness of the strainer; we will now endeavour

deavour to reduce the ſame axiom to a work. For this writing of our *Sylva Sylvarum*, is (to ſpeak properly) not natural hiſtory, but a high kind of natural magick. For it is not a deſcription only of nature, but a breaking of nature, into great and ſtrange works. Try therefore the anointing over of pigeons, or other birds, when they are but in their down; or of whelps, cutting their hair as ſhort as may be; or of ſome other beaſt; with ſome ointment, that is not hurtful to the fleſh; and that will harden and ſtick very cloſe; and ſee whether it will not alter the colours of the feathers or hair. It is received, that the pulling off the firſt feathers of birds clean, will make the new come forth white: and it is certain, that white is a penurious colour, and where moiſture is ſcant. So blue violets, and other flowers, if they be ſtarved, turn pale and white; birds and horſes, by age or ſcars, turn white: and the hoar hairs of men come by the ſame reaſon. And therefore in birds, it is very likely, that the feathers that come firſt, will be many times of divers colours, according to the nature of the bird; for that the ſkin is more porous; but when the ſkin is more ſhut and cloſe, the feathers will come white. This is a good experiment, not only for the producing of birds and beaſts of ſtrange colours; but alſo for the diſcloſure of the nature of colours themſelves; which of them require a finer poroſity, and which a groſſer.

*Experiment ſolitary touching the nouriſhment of living creatures before they be brought forth.*

94. It is a work of providence, that hath been truly obſerved by ſome; that the yolk of the egg conduceth little to the generation of the bird, but only to the nouriſhment of the ſame: for if a chicken be opened, when it is new hatched; you ſhall find much of the yolk remaining. And it is needful, that birds that are ſhaped without the female's womb, have in the egg, as well matter of nouriſhment, as matter of generation for the body. For after the egg is laid, and ſevered from the body of the hen; it hath no more nouriſhment from the hen; but only a quickning heat when ſhe ſitteth. But beaſts and men need not the matter of nouriſhment within themſelves; becauſe they are ſhaped within the womb of the female, and are nouriſhed continually from her body.

*Experiments in conſort touching ſympathy and antipathy for medicinal uſe.*

95. IT is an inveterate and received opinion, that *cantharides* applied to any part of the body, touch the bladder, and exulcerate it, if they ſtay on long. It is likewiſe received, that a kind of ſtone, which they bring out of the *Weſt-Indies*, hath a peculiar force to move gravel, and to diſſolve the ſtone; in ſo much, as laid but to the wriſt, it hath ſo forcibly ſent down gravel, as men have been glad to remove it, it was ſo violent.

96. IT is received and confirmed by daily experience, that the ſoals of the feet have great affinity with the head, and the mouth of the ſtomach: as we ſee, going wet-ſhod, to thoſe that uſe it not, affecteth both: applications of hot powders to the feet attenuate firſt, and after dry the rheum: and therefore a phyſician that would be myſtical, preſcribeth, for the cure of the rheum, that a man ſhould walk continually upon a camomile alley; meaning, that he ſhould put camomile within his ſocks. Likewiſe pigeons bleeding, applied to the ſoals of the feet, eaſe the head: and ſoporiferous medicines applied unto them, provoke ſleep.

97. IT ſeemeth, that as the feet have a ſympathy with the head; ſo the wriſts

wriſts and hands have a ſympathy with the heart; we ſee the affects and paſſions of the heart and ſpirits are notably diſcloſed by the pulſe: and it is often tried, that juices of ſtock-gilly-flowers, roſe-campian, garlick, and other things, applied to the wriſts, and renewed, have cured long agues. And I conceive, that waſhing, with certain liquors, the palms of the hands doth much good: and they do well in heats of agues, to hold in the hands eggs of alabaſter, and balls of cryſtal.

Of theſe things we ſhall ſpeak more, when we handle the title of ſympathy and antipathy in the proper place.

*Experiment ſolitary touching the ſecret proceſſes of nature.*

98. The knowledge of man (hitherto) hath been determined by the view, or ſight; ſo that whatſoever is inviſible, either in reſpect of the fineneſs of the body it ſelf; or the ſmallneſs of the parts; or of the ſubtilty of the motion; is little inquired. And yet theſe be the things that govern nature principally; and without which, you cannot make any true *analyſis* and indication of the proceedings of nature. The ſpirits or pneumaticals, that are in all tangible bodies, are ſcarce known. Sometimes they take them for *vacuum*; whereas they are the moſt active of bodies. Sometimes they take them for air; from which they differ exceedingly, as much as wine from water; and as wood from earth. Sometimes they will have them to be natural heat, or a portion of the element of fire; whereas ſome of them are crude and cold. And ſometimes they will have them to be the virtues and qualities of the tangible parts, which they ſee; whereas they are things by themſelves. And then, when they come to plants and living creatures, they call them ſouls. And ſuch ſuperficial ſpeculations they have; like proſpectives, that ſhew things inward, when they are but paintings. Neither is this a queſtion of words, but infinitely material in nature. For ſpirits are nothing elſe but a natural body, rarified to a proportion, and included in the tangible parts of bodies, as in an integument. And they be no leſs differing one from the other, than the denſe or tangible parts; and they are in all tangible bodies whatſoever, more or leſs; and they are never (almoſt) at reſt: and from them, and their motions, principally proceed arefaction, colliquation, concoction, maturation, putrefaction, vivification, and moſt of the effects of nature: for, as we have figured them in our *Sapientia veterum*, in the fable of *Proſerpina*, you ſhall in the infernal regiment hear little doings of *Pluto*, but moſt of *Proſerpina:* for tangible parts in bodies are ſtupid things; and the ſpirits do (in effect) all. As for the differences of tangible parts in bodies, the induſtry of the chymiſts hath given ſome light, in diſcerning by their ſeparations, the oily, crude, pure, impure, fine, groſs parts of bodies, and the like. And the phyſicians are content to acknowledge, that herbs and drugs have divers parts; as that opium hath a ſtupefactive part, and a heating part; the one moving ſleep, the other a ſweat following; and that rhubarb hath purging parts, and aſtringent parts, *&c.* But this whole inquiſition is weakly and negligently handled. And for the more ſubtle differences of the minute parts, and the poſture of them in the body, (which alſo hath great effects) they are not at all touched: as for the motions of the minute parts of bodies, which do ſo great effects, they have not been obſerved at all; becauſe they are inviſible, and incur not to the eye; but yet they are to be deprehended by experience: as *Democritus* ſaid well, when they charged him to hold, that the world was made of ſuch little moats, as were ſeen in the ſun; *atomus* (ſaith he) *neceſſitate rationis & experientiae eſſe convincitur; atomum*

*mum enim nemo unquam vidit.* And therefore the tumult in the parts of ſolid bodies, when they are compreſſed, which is the cauſe of all flight of bodies through the air, and of other mechanical motions, (as hath been partly touched before, and ſhall be throughly handled in due place) is not ſeen at all. But nevertheleſs, if you know it not, or inquire it not attentively and diligently, you ſhall never be able to diſcern, and much leſs to produce, a number of mechanical motions. Again, as to the motions corporal, within the encloſures of bodies, whereby the effects (which were mentioned before) paſs between the ſpirits and the tangible parts, (which are arefaction, colliquation, concoction, maturation, *&c.*) they are not at all handled. But they are put off by the names of virtues, and natures, and actions, and paſſions, and ſuch other logical words.

*Experiment ſolitary touching the power of heat.*

99. IT is certain, that of all powers in nature, heat is the chief; both in the frame of nature, and in the works of art. Certain it is likewiſe, that the effects of heat are moſt advanced, when it worketh upon a body without loſs or diſſipation of the matter; for that ever betrayeth the account. And therefore it is true, that the power of heat is beſt perceived in diſtillations, which are performed in cloſe veſſels and receptacles. But yet there is a higher degree; for howſoever diſtillations do keep the body in cells and cloyſters, without going abroad, yet they give ſpace unto bodies to turn into vapour; to return into liquor; and to ſeparate one part from another. So as nature doth expatiate, although it hath not full liberty: whereby the true and ultimate operations of heat are not attained. But if bodies may be altered by heat, and yet no ſuch reciprocation of rarefaction, and of condenſation, and of ſeparation, admitted; then it is like that this *Proteus* of matter, being held by the ſleeves, will turn and change into many *metamorphoſes*. Take therefore a ſquare veſſel of iron, in form of a cube, and let it have good thick and ſtrong ſides. Put into it a cube of wood, that may fill it as cloſe as may be; and let it have a cover of iron, as ſtrong (at leaſt) as the ſides; and let it be well luted, after the manner of the chymiſts. Then place the veſſel within burning coals, kept quick kindled for ſome few hours ſpace. Then take the veſſel from the fire, and take off the cover, and ſee what is become of the wood. I conceive, that ſince all inflammation and evaporation are utterly prohibited, and the body ſtill turned upon it ſelf, that one of theſe two effects will follow: either that the body of the wood will be turned into a kind of *amalgama*, (as the chymiſts call it;) or that the finer part will be turned into air, and the groſſer ſtick as it were baked, and incruſtate upon the ſides of the veſſel; being become of a denſer matter, than the wood it ſelf, crude. And for another trial, take alſo water, and put it in the like veſſel, ſtopped as before; but uſe a gentler heat, and remove the veſſel ſometimes from the fire; and again, after ſome ſmall time, when it is cold, renew the heating of it; and repeat this alteration ſome few times: and if you can once bring to paſs, that the water, which is one of the ſimpleſt of bodies, be changed in colour, odour, or taſte, after the manner of compound bodies, you may be ſure that there is a great work wrought in nature, and a notable entrance made into ſtrange changes of bodies, and productions: and alſo a way made to do that by fire, in ſmall time, which the ſun and age do in long time. But of the admirable effects of this diſtillation in cloſe, (for ſo we call it) which is like the wombs and matrices of living creatures, where nothing expireth nor ſeparateth; we will ſpeak fully, in the due place;

not that we aim at the making of *Paracelſus* pygmies, or any ſuch prodigious follies; but that we know the effects of heat will be ſuch, as will ſcarce fall under the conceit of man, if the force of it be altogether kept in.

*Experiment ſolitary touching the impoſſibility of annihilation.*

100. There is nothing more certain in nature, than that it is impoſſible for any body to be utterly annihilated; but that, as it was the work of the omnipotency of God, to make ſomewhat of nothing; ſo it requireth the like omnipotency to turn ſomewhat into nothing. And therefore it is well ſaid by an obſcure writer of the ſect of the chymiſts; that there is no ſuch way to effect the ſtrange tranſmutations of bodies, as to endeavour and urge by all means, the reducing of them to nothing. And herein is contained alſo a great ſecret of preſervation of bodies from change; for if you can prohibit, that they neither turn into air, becauſe no air cometh to them; nor go into the bodies adjacent, becauſe they are utterly heterogeneal; nor make a round and circulation within themſelves; they will never change, though they be in their nature never ſo periſhable or mutable. We ſee, how flies, and ſpiders, and the like, get a ſepulchre in amber, more durable than the monument and embalming of the body of any king. And I conceive the like will be of bodies put into quick-ſilver. But then they muſt be but thin, as a leaf, or a piece of paper or parchment; for if they have a greater craſſitude, they will alter in their own body, though they ſpend not. But of this, we ſhall ſpeak more, when we handle the title of conſervation of bodies.

NATU-

# NATURAL HISTORY.

## CENT. II.

*Experiments in conſort touching muſick.*

MUSICK in the practick, hath been well purſued; and in good variety; but in the theory, and eſpecially in the yielding of the cauſes of the practick, very weakly; being reduced into certain myſtical ſubtilties, of no uſe, and not much truth. We ſhall therefore, after our manner, join the contemplative and active part together.

101. ALL ſounds, are either muſical ſounds, which we call tones; whereunto there may be an harmony; which ſounds are ever equal; as ſinging, the ſounds of ſtringed and wind-inſtruments, the ringing of bells, *&c.* or immuſical ſounds, which are ever unequal; ſuch as are the voice in ſpeaking, all whiſperings, all voices of beaſts and birds, (except they be ſinging birds;) all percuſſions of ſtones, wood, parchment, ſkins, (as in drums;) and infinite others.

102. THE ſounds that produce tones, are ever from ſuch bodies, as are in their parts and pores equal; as well as the ſounds themſelves are equal; and ſuch are the percuſſions of metal, as in bells; of glaſs, as in the fillipping of a drinking glaſs; of air, as in mens voices whilſt they ſing; in pipes, whiſtles, organs, ſtringed inſtruments, *&c.* and of water, as in the nightingale pipes of regals, or organs, and other hydraulicks; which the ancients had, and *Nero* did ſo much eſteem, but are now loſt. And if any man think, that the ſtring of the bow, and the ſtring of the viol, are neither of them equal bodies; and yet produce tones; he is in an error. For the ſound is not created between the bow or *plectrum*, and the ſtring; but between the ſtring and the air; no more than it is between the finger or quill, and the ſtring in other inſtruments. So there are (in effect) but three percuſſions that create tones; percuſſions of metals, (comprehending glaſs, and the like) percuſſions of air, and percuſſions of water.

103. THE *diapaſon* or eight in muſick is the ſweeteſt concord; in ſo much as it is in effect an uniſon; as we ſee in lutes, that are ſtrung in the baſe ſtrings with two ſtrings, one an eight above another; which make but as one ſound. And every eight note in aſcent, (as from eight to fifteen, from fifteen to twenty two, and ſo *in infinitum*) are but ſcales of *diapaſon*. The cauſe is dark, and hath not been rendred by any; and therefore would be better contemplated. It ſeemeth that air, (which is the ſubject of ſounds) in

in ſounds that are not tones, (which are all unequal, as hath been ſaid) admitteth much variety; as we ſee in the voices of living creatures; and likewiſe in the voices of ſeveral men, (for we are capable to diſcern ſeveral men by their voices;) and in the conjugation of letters, whence articulate ſounds proceed; which of all others are moſt various. But in the ſounds which we call tones, (that are ever equal) the air is not able to caſt it ſelf into any ſuch variety; but is forced to recur into one and the ſame poſture or figure, only differing in greatneſs and ſmallneſs. So we ſee figures may be made of lines, crooked and ſtraight, in infinite variety, where there is inequality; but circles or ſquares or triangles equilateral, (which are all figures of equal lines) can differ but in greater or leſſer.

104. IT is to be noted (the rather leſt any man ſhould think, that there is any thing in this number of eight, to create the *diapaſon*) that this computation of eight, is a thing rather received, than any true computation. For a true computation ought ever to be, by diſtribution into equal portions. Now there be intervenient in the riſe of eight (in tones) two beemolls, or half notes; ſo as if you divide the tones equally, the eight is but ſeven whole and equal notes; and if you ſubdivide that into half notes, (as it is in the ſtops of a lute) it maketh the number of thirteen.

105. YET this is true; that in the ordinary riſes and falls of the voice of man (not meaſuring the tone by whole notes, and half notes, which is the equal meaſure;) there fall out to be two beemolls (as hath been ſaid) between the uniſon and the *diapaſon:* and this varying is natural. For if a man would endeavour to raiſe or fall his voice, ſtill by half notes, like the ſtops of a lute; or by whole notes alone without halfs, as far as an eight; he will not be able to frame his voice unto it. Which ſheweth, that after every three whole notes, nature requireth, for all harmonical uſe, one half note to be interpoſed.

106. IT is to be conſidered, that whatſoever virtue is in numbers, for conducing to concent of notes, is rather to be aſcribed to the ante-number, than to the entire number; as namely, that the ſound returneth after ſix, or after twelve; ſo that the ſeventh or the thirteenth is not the matter, but the ſixth or the twelfth; and the ſeventh and the thirteenth are but the limits and boundaries of the return.

107. THE concords in muſick which are perfect or ſemiperfect, between the uniſon, and the *diapaſon*, are the fifth, which is the moſt perfect; the third next; and the ſixth which is more harſh: and as the ancients eſteemed, and ſo do my ſelf and ſome other yet, the fourth which they call *diateſſaron.* As for the tenth, twelfth, thirteenth, and ſo *in infinitum*; they be but recurrences of the former; *viz.* of the third, the fifth, and the ſixth; being an eight reſpectively from them.

108. FOR diſcords, the ſecond and the ſeventh are of all others the moſt odious, in harmony, to the ſenſe; whereof the one is next above the uniſon, the other next under the *diapaſon:* which may ſhew, that harmony requireth a competent diſtance of notes.

109. IN harmony, if there be not a diſcord to the baſe, it doth not diſturb the harmony, though there be a diſcord to the higher parts; ſo the diſcord be not of the two that are odious; and therefore the ordinary concent of four parts conſiſteth of an eight, a fifth, and a third to the baſe; but that fifth is a fourth to the treble, and the third is a ſixth. And the cauſe is, for that the baſe ſtriking more air, doth overcome and drown the treble, (unleſs the diſcord be very odious;) and ſo hideth a ſmall imperfection. For we ſee,

that in one of the lower ſtrings of a lute, there ſoundeth not the ſound of the treble, nor any mixt ſound, but only the ſound of the baſe.

110. WE have no muſick of quarter-notes; and it may be, they are not capable of harmony; for we ſee the half-notes themſelves do but interpoſe ſometimes. Nevertheleſs we have ſome ſlides or reliſhes of the voice, or ſtrings, as it were continued without notes, from one tone to another, riſing or falling, which are delightful.

111. THE cauſes of that which is pleaſing or ingrate to the hearing, may receive light by that which is pleaſing or ingrate to the ſight. There be two things pleaſing to the ſight (leaving pictures and ſhapes aſide, which are but ſecondary objects; and pleaſe or diſpleaſe but in memory) theſe two are colours and order. The pleaſing of colour ſymbolizeth with the pleaſing of any ſingle tone to the ear; but the pleaſing of order doth ſymbolize with harmony. And therefore we ſee in garden-knots, and the frets of houſes, and all equal and well-anſwering figures, (as globes, pyramids, cones, cylinders, *&c.*) how they pleaſe; whereas unequal figures are but deformities. And both theſe pleaſures, that of the eye, and that of the ear, are but the effects of equality, good proportion, or correſpondence: ſo that (out of queſtion) equality, and correſpondence, are the cauſes of harmony. But to find the proportion of that correſpondence, is more abſtruſe; whereof notwithſtanding we ſhall ſpeak ſomewhat, (when we handle tones) in the general enquiry of ſounds.

112. TONES are not ſo apt altogether to procure ſleep, as ſome other ſounds; as the wind, the purling of water, humming of bees, a ſweet voice of one that readeth, *&c.* The cauſe whereof is, for that tones, becauſe they are equal and ſlide not, do more ſtrike and erect ſenſe than the other. And overmuch attention hindreth ſleep.

113. THERE be in muſick certain figures or tropes; almoſt agreeing with the figures of rhetorick; and with the affections of the mind, and other ſenſes. Firſt, the diviſion and quavering, which pleaſe ſo much in muſick, have an agreement with the glittering of light; as the moon-beams playing upon a wave. Again, the falling from a diſcord to a concord, which maketh great ſweetneſs in muſick, hath an agreement with the affections, which are reintegrated to the better, after ſome diſlikes: it agreeth alſo with the taſte, which is ſoon glutted with that which is ſweet alone. The ſliding from the cloſe or cadence, hath an agreement with the figure in rhetorick, which they call *praeter expectatum*; for there is a pleaſure even in being deceived. The reports, and fuges, have an agreement with the figures in rhetorick, of repetition and traduction. The *tripla's*, and changing of times, have an agreement with the changes of motions; as when galliard time, and meaſure time, are in the medley of one dance.

114. IT hath been anciently held and obſerved, that the ſenſe of hearing, and the kinds of muſick, have moſt operation upon manners; as to incourage men, and make them warlike; to make them ſoft and effeminate; to make them grave; to make them light; to make them gentle and inclin'd to pity, *&c.* The cauſe is, for that the ſenſe of hearing ſtriketh the ſpirits more immediately, than the other ſenſes; and more incorporeally than the ſmelling: for the ſight, taſte, and feeling, have their organs, not of ſo preſent and immediate acceſs to the ſpirits, as the hearing hath. And as for the ſmelling, (which indeed worketh alſo immediately upon the ſpirits, and is forcible while the object remaineth) it is with a communication of the breath, or vapour of the object odorate: but harmony entring eaſily, and mingling not

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at all, and coming with a manifeſt motion; doth by cuſtom of often affecting the ſpirits, and putting them into one kind of poſture, alter not a little the nature of the ſpirits, even when the object is removed. And therefore we ſee, that tunes and airs, even in their own nature, have in themſelves ſome affinity with the affections; as there be merry tunes, doleful tunes, ſolemn tunes; tunes inclining mens minds to pity; warlike tunes, &c. So as it is no marvel if they alter the ſpirits, conſidering that tunes have a prediſpoſition to the motion of the ſpirits in themſelves. But yet it hath been noted, that though this variety of tunes doth diſpoſe the ſpirits to variety of paſſions, conform unto them, yet generally muſick feedeth that diſpoſition of the ſpirits which it findeth. We ſee alſo, that ſeveral airs, and tunes, do pleaſe ſeveral nations and perſons, according to the ſympathy they have with their ſpirits.

*Experiments in conſort touching ſounds; and firſt touching the nullity and entity of ſounds.*

PERSPECTIVE hath been with ſome diligence inquired; and ſo hath the nature of ſounds, in ſome ſort, as far as concerneth muſick: But the nature of ſounds in general hath been ſuperficially obſerved. It is one of the ſubtileſt pieces of nature. And beſides, I practiſe, as I do adviſe; which is, after long inquiry of things, immerſe in matter, to interpoſe ſome ſubject which is immateriate, or leſs materiate; ſuch as this of ſounds; to the end, that the intellect may be rectified, and become not partial.

115. IT is firſt to be conſidered, what great motions there are in nature, which paſs without ſound or noiſe. The heavens turn about in a moſt rapid motion, without noiſe to us perceived; though in ſome dreams they have been ſaid to make an excellent muſick. So the motions of the comets, and fiery meteors (as *ſtella cadens*, &c.) yield no noiſe. And if it be thought, that it is the greatneſs of diſtance from us, whereby the ſound cannot be heard; we ſee that lightnings and coruſcations, which are near at hand, yield no ſound neither: And yet in all theſe, there is a percuſſion and diviſion of the air. The winds in the upper region (which move the clouds above, which we call the rack, and are not perceived below) paſs without noiſe. The lower winds in a plain, except they be ſtrong, make no noiſe; but amongſt trees, the noiſe of ſuch winds will be perceived. And the winds (generally) when they make a noiſe, do ever make it unequally, riſing and falling, and ſometimes (when they are vehement) trembling at the height of their blaſt. Rain or hail falling (though vehemently) yieldeth no noiſe in paſſing through the air, till it fall upon the ground, water, houſes, or the like. Water in a river (though a ſwift ſtream) is not heard in the channel, but runneth in ſilence, if it be of any depth; but the very ſtream upon ſhallows, of gravel, or pebble, will be heard. And waters, when they beat upon the ſhore, or are ſtraitned, (as in the falls of bridges) or are daſhed againſt themſelves, by winds, give a roaring noiſe. Any piece of timber, or hard body, being thruſt forwards by another body contiguous, without knocking, giveth no noiſe. And ſo bodies in weighing one upon another, though the upper body preſs the lower body down, make no noiſe. So the motion in the minute parts of any ſolid body, (which is the principal cauſe of violent motion, though unobſerved) paſſeth without ſound; for that ſound that is heard ſometimes, is produced only by the breaking of the air; and not by the impulſion of the parts. So it is manifeſt, that where the anteriour body giveth way, as faſt as the poſteriour cometh on, it maketh no noiſe, be the motion never ſo great or ſwift.

116. AIR

116. AIR open, and at large, maketh no noiſe, except it be ſharply percuſſed; as in the ſound of a ſtring, where air is percuſſed by a hard and ſtiff body, and with a ſharp looſe: for if the ſtring be not ſtrained, it maketh no noiſe. But where the air is pent and ſtraitned, there breath or other blowing, (which carry but a gentle percuſſion) ſuffice to create ſound; as in pipes and wind-inſtruments. But then you muſt note, that in recorders, which go with a gentle breath, the concave of the pipe, were it not for the fipple that ſtraitneth the air, (much more than the ſimple concave) would yield no ſound. For as for other wind-inſtruments, they require a forcible breath; as trumpets, cornets, hunters-horns, *&c.* which appeareth by the blown cheeks of him that windeth them. Organs alſo are blown with a ſtrong wind by the bellows. And note again, that ſome kind of wind-inſtruments are blown at a ſmall hole in the ſide, which ſtraitneth the breath at the firſt entrance; the rather, in reſpect of their traverſe and ſtop above the hole, which performeth the fipples part; as it is ſeen in flutes and fifes, which will not give ſound by a blaſt at the end, as recorders, *&c.* do. Likewiſe in all whiſtling, you contract the mouth; and to make it more ſharp, men ſometimes uſe their finger. But in open air, if you throw a ſtone or a dart, they give no ſound: no more do bullets, except they happen to be a little hollowed in the caſting; which hollowneſs penneth the air: nor yet arrows, except they be ruffled in their feathers, which likewiſe penneth the air. As for ſmall whiſtles or ſhepherds oaten pipes, they give a ſound becauſe of their extreme ſlenderneſs, whereby the air is more pent, than in a wider pipe. Again, the voices of men and living creatures paſs through the throat, which penneth the breath. As for the *Jews* harp it is a ſharp percuſſion; and beſides, hath the advantage of penning the air in the mouth.

117. SOLID bodies, if they be very ſoftly percuſſed, give no ſound; as when a man treadeth very ſoftly upon boards. So cheſts or doors in fair weather, when they open eaſily, give no ſound. And cart-wheels ſqueak not when they are liquored.

118. THE flame of tapers or candles, though it be a ſwift motion and breaketh the air, yet paſſeth without ſound. Air in ovens, though (no doubt) it doth (as it were) boil and dilate it ſelf, and is repercuſſed; yet it is without noiſe.

119. FLAME percuſſed by air, giveth a noiſe; as in blowing of the fire by bellows; greater, than if the bellows ſhould blow upon the air it ſelf. And ſo likewiſe flame percuſſing the air ſtrongly, (as when flame ſuddenly taketh and openeth) giveth a noiſe; ſo great flames, while the one impelleth the other, give a bellowing ſound.

120. THERE is a conceit runneth abroad, that there ſhould be a white powder, which will diſcharge a piece without noiſe; which is a dangerous experiment if it ſhould be true: for it may cauſe ſecret murders. But it ſeemeth to me impoſſible; for, if the air pent be driven forth and ſtrike the air open, it will certainly make a noiſe. As for the white powder, (if any ſuch thing be, that may extinguiſh or dead the noiſe) it is like to be a mixture of petre and ſulphur, without coal. For petre alone will not take fire. And if any man think, that the ſound may be extinguiſhed or deaded, by diſcharging the pent air, before it cometh to the mouth of the piece and to the open air; that is not probable; for it will make more divided ſounds: as if you ſhould make a croſs barrel hollow, through the barrel of a piece, it may be, it would give ſeveral ſounds, both at the noſe and at the ſides. But I conceive, that if it were poſſible to bring to paſs, that there ſhould be

no air pent at the mouth of the piece, the bullet might fly with ſmall or no noiſe. For firſt it is certain, there is no noiſe in the percuſſion of the flame upon the bullet. Next the bullet, in piercing through the air, maketh no noiſe; as hath been ſaid. And then, if there be no pent air that ſtriketh upon open air, there is no cauſe of noiſe; and yet the flying of the bullet will not be ſtayed. For that motion (as hath been oft ſaid) is in the parts of the bullet, and not in the air. So as trial muſt be made by taking ſome ſmall concave of metal, no more than you mean to fill with powder; and laying the bullet in the mouth of it, half out into the open air.

121. I heard it affirmed by a man, that was a great dealer in ſecrets, but he was but vain; that there was a conſpiracy (which himſelf hindred) to have killed Queen *Mary*, ſiſter to Queen *Elizabeth*, by a burning glaſs, when ſhe walked in Saint *James's* park, from the leads of the houſe. But thus much (no doubt) is true; that if burning glaſſes could be brought to a great ſtrength, (as they talk generally of burning glaſſes, that are able to burn a navy) the percuſſion of the air alone, by ſuch a burning glaſs, would make no noiſe; no more than is found in coruſcations and lightnings, without thunders.

122. I ſuppoſe, that impreſſion of the air with ſounds aſketh a time to be conveyed to the ſenſe; as well as the impreſſion of ſpecies viſible. Or elſe they will not be heard. And therefore, as the bullet moveth ſo ſwift, that it is inviſible; ſo the ſame ſwiftneſs of motion maketh it inaudible: for we ſee, that the apprehenſion of the eye, is quicker than that of the ear.

123. All eruptions of air, though ſmall and ſlight, give an entity of ſound, which we call crackling, puffing, ſpitting, *&c.* as in bay-ſalt and bay-leaves, caſt into the fire; ſo in cheſtnuts, when they leap forth of the aſhes; ſo in green wood laid upon the fire, eſpecially roots; ſo in candles that ſpit flame, if they be wet; ſo in raſping, ſneezing, *&c.* ſo in a roſe leaf gathered together into the faſhion of a purſe, and broken upon the forehead, or back of the hand, as children uſe.

*Experiments in conſort touching production, conſervation, and delation of ſounds; and the office of the air therein.*

124. The cauſe given of ſound, that it would be an eliſion of the air, (whereby, if they mean any thing, they mean a cutting or dividing, or elſe an attenuating of the air) is but a term of ignorance; and the motion is but a catch of the wit upon a few inſtances; as the manner is in the philoſophy received. And it is common with men, that if they have gotten a pretty expreſſion, by a word of art, that expreſſion goeth current; though it be empty of matter. This conceit of eliſion, appeareth moſt manifeſtly to be falſe, in that the ſound of a bell, ſtring, or the like, continueth melting ſome time after the percuſſion; but ceaſeth ſtraightways, if the bell, or ſtring, be touched and ſtayed: whereas, if it were the eliſion of the air that made the ſound, it could not be, that the touch of the bell or ſtring ſhould extinguiſh ſo ſuddenly that motion, cauſed by the eliſion of the air. This appeareth yet more manifeſtly, by chiming with a hammer, upon the outſide of a bell; for the ſound will be according to the inward concave of the bell; whereas the eliſion or attenuation of the air, cannot be but only between the hammer and the outſide of the bell. So again, if it were an eliſion, a broad hammer, and a bodkin, ſtruck upon metal, would give a diverſe tone, as well as a diverſe loudneſs: but they do not ſo; for though the ſound of the one be louder, and of the other ſofter, yet the tone is the ſame.

Beſides, in echoes (whereof ſome are as loud as the original voice) there is no new eliſion, but a repercuſſion only. But that which convinceth it moſt of all is, that ſounds are generated, where there is no air at all. But theſe and the like conceits, when men have cleared their underſtanding, by the light of experience, will ſcatter and break up like a miſt.

125. IT is certain, that ſound is not produced at the firſt, but with ſome local motion of the air or flame, or ſome other medium; nor yet without ſome reſiſtance, either in the air or the body percuſſed. For if there be a mere yielding or ceſſion, it produceth no ſound; as hath been ſaid. And therein ſounds differ from light and colours, which paſs through the air, or other bodies, without any local motion of the air; either at the firſt, or after. But you muſt attentively diſtinguiſh, between the local motion of the air (which is but *vehiculum cauſae*, a carrier of the ſounds) and the ſounds themſelves, conveyed in the air. For as to the former, we ſee manifeſtly, that no ſound is produced, (no not by air it ſelf againſt other air, as in organs, *&c.*) but with a perceptible blaſt of the air; and with ſome reſiſtance of the air ſtrucken. For even all ſpeech, (which is one of the gentleſt motions of air) is with expulſion of a little breath. And all pipes have a blaſt, as well as a ſound. We ſee alſo manifeſtly, that ſounds are carried with wind: and therefore ſounds will be heard further with the wind, than againſt the wind; and likewiſe do riſe and fall with the intenſion or remiſſion of the wind. But for the impreſſion of the ſound, it is quite another thing; and is utterly without any local motion of the air, perceptible; and in that reſembleth the ſpecies viſible: for after a man hath lured, or a bell is rung, we cannot diſcern any perceptible motion (at all) in the air along as the ſound goeth; but only at the firſt. Neither doth the wind (as far as it carrieth a voice) with the motion thereof, confound any of the delicate and articulate figurations of the air, in variety of words. And if a man ſpeak a good loudneſs againſt the flame of a candle, it will not make it tremble much; though moſt, when thoſe letters are pronounced which contract the mouth; as *F*, *S*, *V*, and ſome others. But gentle breathing, or blowing without ſpeaking, will move the candle far more. And it is the more probable, that ſound is without any local motion of the air, becauſe as it differeth from the ſight, in that it needeth a local motion of the air at firſt; ſo it parallelleth in ſo many other things with the ſight, and radiation of things viſible; which (without all queſtion) induce no local motion in the air, as hath been ſaid.

126. NEVERTHELESS it is true, that upon the noiſe of thunder, and great ordnance, glaſs windows will ſhake; and fiſhes are thought to be frayed with the motion, cauſed by noiſe upon the water. But theſe effects are from the local motion of the air, which is a concomitant of the ſound, (as hath been ſaid) and not from the ſound.

127. IT hath been anciently reported, and is ſtill received, that extreme applauſes and ſhouting of people aſſembled in great multitudes, have ſo rarefied and broken the air, that birds flying over have fallen down, the air being not able to ſupport them. And it is believed by ſome, that great ringing of bells in populous cities hath chaſed away thunder; and alſo diſſipated peſtilent air: all which may be alſo from the concuſſion of the air, and not from the ſound.

128. A very great ſound, near hand, hath ſtrucken many deaf; and at the inſtant they have found, as it were, the breaking of a ſkin or parchment in their ear: and my ſelf ſtanding near one that lured loud and ſhrill,

had ſuddenly an offence, as if ſomewhat had broken, or been diſlocated in my ear; and immediately after a loud ringing (not an ordinary ſinging or hiſſing, but far louder and differing;) ſo as I feared ſome deafneſs. But after ſome half quarter of an hour it vaniſhed. This effect may be truly referred unto the ſound: for (as is commonly received) an over-potent object doth deſtroy the ſenſe; and ſpiritual ſpecies (both viſible and audible) will work upon the ſenſories, though they move not any other body.

129. In delation of ſounds, the encloſure of them preſerveth them, and cauſeth them to be heard further. And we find in rolls of parchment or trunks, the mouth being laid to the one end of the roll of parchment or trunk, and the ear to the other, the ſound is heard much farther than in the open air. The cauſe is, for that the ſound ſpendeth, and is diſſipated in the open air; but in ſuch concaves it is conſerved and contracted. So alſo in a piece of ordnance, if you ſpeak in the touch-hole, and another lay his ear to the mouth of the piece, the ſound paſſeth and is far better heard than in the open air.

130. It is further to be conſidered, how it proveth and worketh, when the ſound is not encloſed all the length of his way, but paſſeth partly through open air; as where you ſpeak ſome diſtance from a trunk; or where the ear is ſome diſtance from the trunk at the other end; or where both mouth and ear are diſtant from the trunk. And it is tried, that in a long trunk of ſome eight or ten foot, the ſound is holpen, though both the mouth and the ear be a handful or more from the ends of the trunk; and ſomewhat more holpen, when the ear of the hearer is near, than when the mouth of the ſpeaker. And it is certain, that the voice is better heard in a chamber from abroad, than abroad from within the chamber.

131. As the encloſure that is round about and entire, preſerveth the ſound; ſo doth a ſemi-concave, though in a leſs degree. And therefore, if you divide a trunk, or a cane into two, and one ſpeak at the one end, and you lay your ear at the other, it will carry the voice further, than in the air at large. Nay further, if it be not a full ſemi-concave, but if you do the like upon the maſt of a ſhip, or a long pole, or a piece of ordnance, (though one ſpeak upon the ſurface of the ordnance, and not at any of the bores;) the voice will be heard farther than in the air at large.

132. It would be tried, how, and with what proportion of diſadvantage the voice will be carried in an horn, which is a line arched; or in a trumpet, which is a line retorted; or in ſome pipe that were ſinuous.

133. It is certain, (howſoever it croſs the received opinion) that ſounds may be created without air, though air be the moſt favourable deferent of ſounds. Take a veſſel of water, and knap a pair of tongs ſome depth within the water, and you ſhall hear the ſound of the tongs well, and not much diminiſhed; and yet there is no air at all preſent.

134. Take one veſſel of ſilver, and another of wood, and fill each of them full of water, and then knap the tongs together, as before, about an handful from the bottom, and you ſhall find the ſound much more reſounding from the veſſel of ſilver, than from that of wood: and yet if there be no water in the veſſel, ſo that you knap the tongs in the air, you ſhall find no difference between the ſilver and the wooden veſſel. Whereby, beſide the main point of creating ſound without air, you may collect two things: the one, that the ſound communicateth with the bottom of the veſſel; the other, that ſuch a communication paſſeth far better through water than air.

135. Strike

135. STRIKE any hard bodies together, in the midſt of a flame; and you ſhall hear the ſound with little difference from the ſound in the air.

136. THE pneumatical part which is in all tangible bodies, and hath ſome affinity with the air, performeth, in ſome degree, the parts of the air; as when you knock upon an empty barrel, the ſound is (in part) created by the air on the outſide; and (in part) by the air in the inſide: for the ſound will be greater or leſſer, as the barrel is more empty or more full; but yet the ſound participateth alſo with the ſpirit in the wood, through which it paſſeth, from the outſide to the inſide: and ſo it cometh to paſs in the chiming of bells on the outſide; where alſo the ſound paſſeth to the inſide: and a number of other like inſtances, whereof we ſhall ſpeak more when we handle the communication of ſounds.

137. IT were extreme groſſneſs to think, (as we have partly touched before) that the ſound in ſtrings is made or produced between the hand and the ſtring, or the quill and the ſtring, or the bow and the ſtring: for thoſe are but *vehicula motus*, paſſages to the creation of the ſound, the ſound being produced between the ſtring and the air; and that not by any impulſion of the air from the firſt motion of the ſtring; but by the return or reſult of the ſtring, which was ſtrained by the touch to his former place: which motion of reſult is quick and ſharp; whereas the firſt motion is ſoft and dull. So the bow tortureth the ſtring continually, and thereby holdeth it in a continual trepidation.

*Experiments in conſort touching the magnitude and exility and damps of ſounds.*

138. TAKE a trunk, and let one whiſtle at the one end, and hold your ear at the other, and you ſhall find the ſound ſtrike ſo ſharp, as you can ſcarce endure it. The cauſe is, for that ſound diffuſeth it ſelf in round, and ſo ſpendeth it ſelf; but if the ſound, which would ſcatter in open air, be made to go all into a canal, it muſt needs give greater force to the ſound. And ſo you may note, that encloſures do not only preſerve ſound, but alſo increaſe and ſharpen it.

139. A hunter's horn being greater at one end than at the other, doth increaſe the ſound more, than if the horn were all of an equal bore. The cauſe is, for that the air and ſound being firſt contracted at the leſſer end, and afterwards having more room to ſpread at the greater end, do dilate themſelves; and in coming out ſtrike more air; whereby the ſound is the greater and baſer. And even hunters horns, which are ſometimes made ſtraight, and not oblique, are ever greater at the lower end. It would be tried alſo in pipes, being made far larger at the lower end: or being made with a belly towards the lower end; and then iſſuing into a ſtraight concave again.

140. THERE is in Saint *James*'s fields a conduit of brick, unto which joineth a low vault; and at the end of that a round houſe of ſtone: and in the brick conduit there is a window; and in the round houſe a ſlit or rift of ſome little breadth: if you cry out in the rift, it will make a fearful roaring at the window. The cauſe is the ſame with the former; for that all concaves, that proceed from more narrow to more broad, do amplify the ſound at the coming out.

141. HAWKS bells, that have holes in the ſides, give a greater ring, than if the pellet did ſtrike upon braſs in the open air. The cauſe is the ſame with the firſt inſtance of the trunk; namely, for that the ſound incloſed with the ſides of the bell, cometh forth at the holes unſpent and more ſtrong.

142. IN

142. IN drums, the cloſeneſs round about that preſerveth the ſound from diſperſing, maketh the noiſe come forth at the drum-hole, far more loud and ſtrong, than if you ſhould ſtrike upon the like ſkin, extended in the open air. The cauſe is the ſame with the two precedent.

143. SOUNDS are better heard, and farther off, in an evening or in the night, than at the noon or in the day. The cauſe is, for that in the day, when the air is more thin, (no doubt) the ſound pierceth better; but when the air is more thick (as in the night) the ſound ſpendeth and ſpreadeth abroad leſs: and ſo it is a degree of encloſure. As for the night, it is true alſo that the general ſilence helpeth.

144. THERE be two kinds of reflexions of ſounds; the one at diſtance, which is the echo; wherein the original is heard diſtinctly, and the reflexion alſo diſtinctly; of which we ſhall ſpeak hereafter: the other in concurrence; when the ſound reflecting (the reflexion being near at hand) returneth immediately upon the original, and ſo iterateth it not, but amplifieth it. Therefore we ſee, that muſick upon the water ſoundeth more; and ſo likewiſe muſick is better in chambers wainſcotted than hanged.

145. THE ſtrings of a lute, or viol, or virginals, do give a far greater ſound, by reaſon of the knot and board and concave underneath, than if there were nothing but only the flat of a board without that hollow and knot, to let in the upper air into the lower. The cauſe is the communication of the upper air with the lower; and penning of both from expence or diſperſing.

146. AN *Iriſh* harp hath open air on both ſides of the ſtrings: and it hath the concave or belly not along the ſtrings, but at the end of the ſtrings. It maketh a more reſounding ſound than a bandora, orpharion, or cittern, which have likewiſe wire-ſtrings. I judge the cauſe to be, for that open air on both ſides helpeth, ſo that there be a concave; which is therefore beſt placed at the end.

147. IN a virginal, when the lid is down, it maketh a more exile ſound, than when the lid is open. The cauſe is, for that all ſhutting in of air, where there is no competent vent, dampeth the ſound: which maintaineth likewiſe the former inſtance; for the belly of the lute or viol doth pen the air ſomewhat.

148. THERE is a church at *Glouceſter*, (and as I have heard the like is in ſome other places) where if you ſpeak againſt a wall ſoftly, another ſhall hear your voice better a good way off, than near at hand. Enquire more particularly of the frame of that place. I ſuppoſe there is ſome vault or hollow or iſle, behind the wall, and ſome paſſage to it towards the farther end of that wall, againſt which you ſpeak; ſo as the voice of him that ſpeaketh ſlideth behind the wall, and then entreth at ſome paſſage, and communicateth with the air of the hollow; for it is preſerved ſomewhat by the plain wall; but that is too weak to give a ſound audible, till it hath communicated with the back air.

149. STRIKE upon a bow-ſtring, and lay the horn of the bow near your ear, and it will increaſe the ſound, and make a degree of a tone. The cauſe is, for that the ſenſory, by reaſon of the cloſe holding, is percuſſed before the air diſperſeth. The like is, if you hold the horn betwixt your teeth: But that is a plain delation of the ſound, from the teeth to the inſtrument of hearing; for there is a great intercourſe between thoſe two parts; as appeareth by this, that a harſh grating tune ſetteth the teeth on edge. The like falleth

falleth out, if the horn of the bow be put upon the temples; but that is but the ſlide of the ſound from thence to the ear.

150. IF you take a rod of iron or braſs, and hold the one end to your ear, and ſtrike upon the other, it maketh a far greater ſound than the like ſtroke upon the rod, not ſo made contiguous to the ear. By which, and by ſome other inſtances that have been partly touched, it ſhould appear; that ſounds do not only ſlide upon the ſurface of a ſmooth body, but do alſo communicate with the ſpirits, that are in the pores of the body.

151. I remember in *Trinity College* in *Cambridge*, there was an upper chamber, which being thought weak in the roof of it, was ſupported by a pillar of iron of the bigneſs of one's arm in the midſt of the chamber; which if you had ſtruck, it would make a little flat noiſe in the room where it was ſtruck, but it would make a great bomb in the chamber beneath.

152. THE ſound which is made by buckets in a well, when they touch upon the water, or when they ſtrike upon the ſide of the well, or when two buckets daſh the one againſt the other, theſe ſounds are deeper and fuller than if the like percuſſion were made in the open air. The cauſe is the penning and encloſure of the air in the concave of the well.

153. BARRELS placed in a room under the floor of a chamber, make all noiſes in the ſame chamber more full and reſounding.

SO that there be five ways (in general) of majoration of ſounds: encloſure ſimple; encloſure with dilatation; communication; reflexion concurrent; and approach to the ſenſory.

154. FOR exility of the voice or other ſounds; it is certain that the voice doth paſs through ſolid and hard bodies if they be not too thick: And through water, which is likewiſe a very cloſe body; and ſuch an one as letteth not in air. But then the voice, or other ſound, is reduced by ſuch paſſage to a great weakneſs or exility. If therefore you ſtop the holes of a hawk's bell, it will make no ring, but a flat noiſe or rattle. And ſo doth the *aetites* or eagle-ſtone, which hath a little ſtone within it.

155. AND as for water, it is a certain trial: let a man go into a bath, and take a pail, and turn the bottom upward, and carry the mouth of it (even) down to the level of the water, and ſo preſs it down under the water, ſome handful and an half, ſtill keeping it even, that it may not tilt on either ſide, and ſo the air get out: then let him that is in the bath, dive with his head ſo far under water, as he may put his head into the pail, and there will come as much air bubbling forth, as will make room for his head. Then let him ſpeak, and any that ſhall ſtand without ſhall hear his voice plainly; but yet made extream ſharp and exile, like the voice of puppets: but yet the articulate ſounds of the words will not be confounded. Note, that it may be much more handſomely done, if the pail be put over the man's head above water, and then he cowre down, and the pail be preſſed down with him. Note that a man muſt kneel or ſit, that he may be lower than the water. A man would think that the *Sicilian* poet had knowledge of this experiment; for he ſaith, that *Hercules*'s page *Hylas* went with a water-pot to fill it at a pleaſant fountain that was near the ſhore, and that the nymphs of the fountain fell in love with the boy, and pulled him under water, keeping him alive; and that *Hercules* miſſing his page, called him by his name aloud, that all the ſhore rang of it; and that *Hylas* from within the water anſwered his maſter; but (that which is to the preſent purpoſe) with ſo ſmall and exile a voice, as *Hercules* thought he had been three miles off, when the fountain (indeed) was faſt by.

156. IN

156. IN lutes and inſtruments of ſtrings, if you ſtop a ſtring high, (whereby it hath leſs ſcope to tremble) the ſound is more treble, but yet more dead.

157. TAKE two ſaucers, and ſtrike the edge of the one againſt the bottom of the other, within a pail of water; and you ſhall find, that as you put the ſaucers lower and lower, the ſound groweth more flat; even while part of the ſaucer is above the water: but that flatneſs of ſound is joined with a harſhneſs of ſound; which no doubt is cauſed by the inequality of the ſound, which cometh from the part of the ſaucer under the water, and from the part above. But when the ſaucer is wholly under the water, the ſound becometh more clear, but far more low; and as if the ſound came from afar off.

158. A ſoft body dampeth the ſound much more than a hard; as if a bell hath cloth or ſilk wrapped about it, it deadeth the ſound more than if it were wood. And therefore in clericals the keys are lined; and in colleges they uſe to line the tablemen.

159. TRIAL was made in a recorder after theſe ſeveral manners. The bottom of it was ſet againſt the palm of the hand, ſtopped with wax round about, ſet againſt a damaſk cuſhion; thruſt into ſand; into aſhes; into water, (half an inch under the water) cloſe to the bottom of a ſilver baſon; and ſtill the tone remained: but the bottom of it was ſet againſt a woollen carpet; a lining of pluſh; a lock of wool, (though looſely put in) againſt ſnow; and the ſound of it was quite deaded, and but breath.

160. IRON hot produceth not ſo full a ſound as when it is cold; for while it is hot, it appeareth to be more ſoft and leſs reſounding. So likewiſe warm water, when it falleth, maketh not ſo full a ſound as cold: And I conceive it is ſofter, and nearer the nature of oil; for it is more ſlippery, as may be perceived in that it ſcowreth better.

161. LET there be a recorder made with two fipples, at each end one; the trunk of it of the length of two recorders, and the holes anſwerable towards each end; and let two play the ſame leſſon upon it at an uniſon; and let it be noted whether the ſound be confounded, or amplified, or dulled. So likewiſe let a croſs be made of two trunks (throughout) hollow; and let two ſpeak, or ſing, the one long ways, the other traverſe: and let two hear at the oppoſite ends; and note, whether the ſound be confounded, amplified, or dulled. Which two inſtances will alſo give light to the mixture of ſounds, whereof we ſhall ſpeak hereafter.

162. A bellows blown in at the hole of a drum, and the drum then ſtrucken, maketh the ſound a little flatter, but no other apparent alteration. The cauſe is manifeſt; partly for that it hindreth the iſſue of the ſound; and partly for that it maketh the air, being blown together, leſs moveable.

*Experiments in conſort touching the loudneſs or ſoftneſs of ſounds, and their carriage at longer or ſhorter diſtance.*

163. The loudneſs and ſoftneſs of ſounds, is a thing diſtinct from the magnitude and exility of ſounds; for a baſe ſtring, though ſoftly ſtrucken, giveth the greater ſound; but a treble ſtring, if hard ſtrucken, will be heard much farther off. And the cauſe is, for that the baſe ſtring ſtriketh more air, and the treble leſs air, but with a ſharper percuſſion.

164. IT is therefore the ſtrength of the percuſſion, that is a principal cauſe of the loudneſs or ſoftneſs of ſounds; as in knocking harder or ſofter; winding of a horn ſtronger or weaker; ringing of a hand-bell harder or ſofter, &c.

*&c.* And the ſtrength of this percuſſion conſiſteth as much or more in the hardneſs of the body percuſſed, as in the force of the body percuſſing: for if you ſtrike againſt a cloth, it will give a leſs ſound; if againſt wood, a greater; if againſt metal, yet a greater; and in metals, if you ſtrike againſt gold (which is the more pliant) it giveth the flatter ſound; if againſt ſilver or braſs, the more ringing ſound. As for air, where it is ſtrongly pent, it matcheth a hard body. And therefore we ſee in diſcharging of a piece, what a great noiſe it maketh. We ſee alſo, that the charge with bullet, or with paper wet and hard ſtopped, or with powder alone rammed in hard, maketh no great difference in the loudneſs of the report.

165. THE ſharpneſs or quickneſs of the percuſſion, is a great cauſe of the loudneſs, as well as the ſtrength: as in a whip or wand, if you ſtrike the air with it; the ſharper and quicker you ſtrike it, the louder ſound it giveth. And in playing upon the lute or virginals, the quick ſtroke or touch is a great life to the ſound. The cauſe is, for that the quick ſtriking cutteth the air ſpeedily; whereas the ſoft ſtriking doth rather beat than cut.

*Experiments in conſort touching the communication of ſounds.*

THE communication of ſounds (as in bellies of lutes, empty veſſels, *&c.*) hath been touched *obiter* in the menſuration of ſounds; but it is fit alſo to make a title of it apart.

166. THE experiment for greateſt demonſtration of communication of ſounds, is the chiming of bells; where if you ſtrike with a hammer upon the upper part, and then upon the midſt, and then upon the lower, you ſhall find the ſound to be more treble and more baſe, according unto the concave on the inſide, though the percuſſion be only on the outſide.

167. WHEN the ſound is created between the blaſt of the mouth and the air of the pipe, it hath nevertheleſs ſome communication with the matter of the ſides of the pipe, and the ſpirits in them contained; for in a pipe, or trumpet, of wood and braſs, the ſound will be divers; ſo if the pipe be covered with cloth or ſilk, it will give a divers ſound from that it would do of it ſelf; ſo if the pipe be a little wet on the inſide, it will make a differing ſound from the ſame pipe dry.

168. THAT ſound made within water, doth communicate better with a hard body through water, than made in air it doth with air; *vide experimentum* 134.

*Experiments in conſort touching equality and inequality of ſounds.*

WE have ſpoken before (in the inquiſition touching muſick) of muſical ſounds, whereunto there may be a concord or diſcord in two parts; which ſounds we call tones; and likewiſe of immuſical ſounds; and have given the cauſe, that the tone proceedeth of equality, and the other of inequality. And we have alſo expreſſed there, what are the equal bodies that give tones, and what are the unequal that give none. But now we ſhall ſpeak of ſuch inequality of ſounds, as proceedeth not from the nature of the bodies themſelves, but is accidental; either from the roughneſs or obliquity of the paſſage, or from the doubling of the percutient, or from the trepidation of the motion.

169. A bell, if it have a rift in it, whereby the ſound hath not a clear paſſage, giveth a hoarſe and jarring ſound; ſo the voice of man, when by cold taken the weſil groweth rugged, and (as we call it) furred, becometh hoarſe. And in theſe two inſtances the ſounds are ingrate, becauſe they are merely un-

equal: but if they be unequal in equality, then the ſound is grateful but purling.

170. ALL inſtruments that have either returns, as trumpets, or flexions, as cornets; or are drawn up, and put from, as ſackbuts; have a purling ſound: but the recorder, or flute, that have none of theſe inequalities, give a clear ſound. Nevertheleſs, the recorder it ſelf, or pipe moiſtened a little in the inſide, ſoundeth more ſolemnly, and with a litle purling or hiſſing. Again, a wreathed ſtring, ſuch as are in the baſe ſtrings of bandora's, giveth alſo a purling ſound.

171. BUT a lute-ſtring, if it be merely unequal in its parts, giveth a harſh and untuneable ſound; which ſtrings we call falſe, being bigger in one place than in another, and therefore wire-ſtrings are never falſe. We ſee alſo, that when we try a falſe lute-ſtring, we uſe to extend it hard between the fingers, and to fillip it; and if it giveth a double ſpecies, it is true; but if it giveth a treble, or more, it is falſe.

172. WATERS, in the noiſe they make as they run, repreſent to the ear a trembling noiſe; and in regals, (where they have a pipe they call the nightingale-pipe, which containeth water) the ſound hath a continual trembling: and children have alſo little things they call cocks, which have water in them; and when they blow or whiſtle in them, they yield a trembling noiſe; which trembling of water hath an affinity with the letter *L*. All which inequalities of trepidation are rather pleaſant than otherwiſe.

173. ALL baſe notes, or very treble notes, give an aſper ſound; for that the baſe ſtriketh more air, than it can well ſtrike equally: and the treble cutteth the air ſo ſharp, as it returneth too ſwift to make the ſound equal: and therefore a mean or tenor is the ſweeteſt part.

174. WE know nothing that can at pleaſure make a muſical or immuſical ſound by voluntary motion, but the voice of man and birds. The cauſe is (no doubt) in the weſil or wind-pipe, (which we call *aſpera arteria*;) which being well extended, gathereth equality; as a bladder that is wrinkled, if it be extended, becometh ſmooth. The extenſion is always more in tones than in ſpeech: therefore the inward voice or whiſper can never give a tone. And in ſinging, there is (manifeſtly) a greater working and labour of the throat, than in ſpeaking; as appeareth in the thruſting out or drawing in of the chin, when we ſing.

175. THE humming of bees is an unequal buzzing, and is conceived by ſome of the ancients, not to come forth at their mouth, but to be an inward ſound; but (it may be) it is neither; but from the motion of their wings; for it is not heard but when they ſtir.

176. ALL metals quenched in water give a ſibilation or hiſſing ſound; (which hath an affinity with the letter *Z*) notwithſtanding the ſound be created between the water or vapour, and the air. Seething alſo, if there be but ſmall ſtore of water in a veſſel, giveth a hiſſing ſound; but boiling in a full veſſel giveth a bubbling ſound, drawing ſomewhat near to the cocks uſed by children.

177. TRIAL would be made, whether the inequality or interchange of the medium will not produce an inequality of ſound; as if three bells were made one within another, and air betwixt each; and then the outermoſt bell were chimed with a hammer, how the ſound would differ from a ſimple bell. So likewiſe take a plate of braſs, and a plank of wood, and join them cloſe together, and knock upon one of them, and ſee if they do not give an unequal ſound. So make two or three partitions of wood in a hogſhead,

with holes or knots in them; and mark the difference of their ſound from the ſound of an hogſhead without ſuch partitions.

*Experiments in conſort touching the more treble, and the more baſe tones, or muſical ſounds.*

178. IT is evident, that the percuſſion of the greater quantity of air, cauſeth the baſer ſound; and the leſs quantity the more treble ſound. The percuſſion of the greater quantity of air, is produced by the greatneſs of the body percuſſing; by the latitude of the concave by which the ſound paſſeth; and by the longitude of the ſame concave. Therefore we ſee that a baſe ſtring is greater than a treble; a baſe pipe hath a greater bore than a treble; and in pipes, and the like, the lower the note-holes be, and the further off from the mouth of the pipe, the more baſe ſound they yield; and the nearer the mouth, the more treble. Nay more, if you ſtrike an entire body, as an andiron of braſs at the top, it maketh a more treble ſound; and at the bottom a baſer.

179. IT is alſo evident, that the ſharper or quicker percuſſion of air cauſeth the more treble ſound; and the lower or heavier the more baſe ſound. So we ſee in ſtrings; the more they are wound up and ſtrained, (and thereby give a more quick ſtart-back) the more treble is the ſound; and the ſlacker they are, or leſs wound up, the baſer is the ſound. And therefore a bigger ſtring more ſtrained, and a leſſer ſtring leſs ſtrained, may fall into the ſame tone.

180. CHILDREN, women, eunuchs have more ſmall and ſhrill voices, than men. The reaſon is, not for that men have greater heat, which may make the voice ſtronger, (for the ſtrength of a voice or ſound, doth make a difference in the loudneſs or ſoftneſs, but not in the tone) but from the dilatation of the organ; which (it is true) is likewiſe cauſed by heat. But the cauſe of changing the voice at the years of puberty, is more obſcure. It ſeemeth to be, for that when much of the moiſture of the body, which did before irrigate the parts, is drawn down to the ſpermatical veſſels; it leaveth the body more hot than it was; whence cometh the dilatation of the pipes: for we ſee plainly all effects of heat do then come on; as piloſity, more roughneſs in the ſkin, hardneſs of the fleſh, *&c.*

181. THE induſtry of the muſician hath produced two other means of ſtraining or intenſion of ſtrings, beſides their winding up. The one is the ſtopping of the ſtring with the finger; as in the necks of lutes, viols, *&c.* The other is the ſhortneſs of the ſtring, as in harps, virginals, *&c.* Both theſe have one and the ſame reaſon; for they cauſe the ſtring to give a quicker ſtart.

182. IN the ſtraining of a ſtring, the further it is ſtrained, the leſs ſuperſtraining goeth to a note; for it requireth good winding of a ſtring before it will make any note at all: and in the ſtops of lutes, *&c.* the higher they go, the leſs diſtance is between the frets.

183. IF you fill a drinking-glaſs with water, (eſpecially one ſharp below, and wide above) and fillip upon the brim or outſide; and after empty part of the water, and ſo more and more, and ſtill try the tone by fillipping; you ſhall find the tone fall and be more baſe, as the glaſs is more empty.

*Experiments in conſort touching the proportion of treble and baſe tones.*

THE juſt and meaſured proportion of the air percuſſed, towards the baſeneſs or trebleneſs of tones, is one of the greateſt ſecrets in the contemplation of ſounds. For it diſcovereth the true coincidence of tones into *diapaſons*;

which is the return of the ſame ſound. And ſo of the concords and diſcords between the uniſon and the *diapaſon*, which we have touched before in the experiments of muſick; but think fit to reſume it here, as a principal part of our inquiry touching the nature of ſounds. It may be found out in the proportion of the winding of ſtrings; in the proportion of the diſtance of frets; and in the proportion of the concave of pipes, *&c.* but moſt commodiouſly in the laſt of theſe.

184. TRY therefore the winding of a ſtring once about, as ſoon as it is brought to that extenſion as will give a tone; and then of twice about, and thrice about, *&c.* and mark the ſcale or difference of the riſe of the tone: whereby you ſhall diſcover in one two effects; both the proportion of the ſound towards the dimenſion of the winding; and the proportion likewiſe of the ſound towards the ſtring, as it is more or leſs ſtrained. But note that to meaſure this, the way will be, to take the length in a right line of the ſtring, upon any winding about of the peg.

185. As for the ſtops, you are to take the number of frets; and principally the length of the line, from the firſt ſtop of the ſtring, unto ſuch a ſtop as ſhall produce a *diapaſon* to the former ſtop upon the ſame ſtring.

186. BUT it will beſt (as it is ſaid) appear in the bores of wind-inſtruments: and therefore cauſe ſome half dozen pipes to be made, in length and all things elſe alike, with a ſingle, double, and ſo on to a ſextuple bore; and ſo mark what fall of tone every one giveth. But ſtill in theſe three laſt inſtances, you muſt diligently obſerve, what length of ſtring, or diſtance of ſtop, or concave of air, maketh what riſe of ſound. As in the laſt of theſe (which, as we ſaid, is that which giveth the apteſt demonſtration) you muſt ſet down what increaſe of concave goeth to the making of a note higher; and what of two notes, and what of three notes; and ſo up to the *diapaſon:* for then the great ſecret of numbers and proportions will appear. It is not unlike that thoſe that make recorders, *&c.* know this already: for that they make them in ſets: And likewiſe bell-founders, in fitting the tune of their bells. So that inquiry may ſave trial. Surely it hath been obſerved by one of the ancients, that an empty barrel knocked upon with the finger, giveth a *diapaſon* to the ſound of the like barrel full; but how that ſhould be, I do not well underſtand; for that the knocking of a barrel full or empty, doth ſcarce give any tone.

187. THERE is required ſome ſenſible difference in the proportion of creating a note, towards the ſound it ſelf, which is the paſſive: and that it be not too near, but at a diſtance. For in a recorder, the three uppermoſt holes yield one tone; which is a note lower than the tone of the firſt three. And the like (no doubt) is required in the winding or ſtopping of ſtrings.

*Experiments in conſort touching exteriour and interiour ſounds.*

THERE is another difference of ſounds which we will call exteriour and interiour. It is not ſoft nor loud: nor, it is not baſe nor treble: nor, it is not muſical nor immuſical: though it be true, that there can be no tone in an interiour ſound; but on the other ſide, in an exteriour ſound there may be both muſical and immuſical. We ſhall therefore enumerate them, rather than preciſely diſtinguiſh them; though (to make ſome adumbration of that we mean) the interiour is rather an impulſion or contuſion of the air, than an eliſion or ſection of the ſame: So as the percuſſion of the one towards the other, differeth as a blow differeth from a cut.

188. IN ſpeech of man, the whiſpering (which they call *ſuſurrus* in latin)

whether it be louder or ſofter, is an interiour ſound; but the ſpeaking out is an exteriour ſound; and therefore you can never make a tone, nor ſing in whiſpering; but in ſpeech you may: ſo breathing, or blowing by the mouth, bellows, or wind, (though loud) is an interiour ſound; but the blowing through a pipe or concave, (though ſoft) is an exteriour. So likewiſe the greateſt winds, if they have no coarctation or blow not hollow, give an interiour ſound; the whiſtling or hollow wind yieldeth a ſinging, or exteriour ſound; the former being pent by ſome other body; the latter being pent in by its own denſity: and therefore we ſee, that when the wind bloweth hollow, it is a ſign of rain. The flame, as it moveth within it ſelf or is blown by a bellows, giveth a murmur or interiour ſound.

189. THERE is no hard body, but ſtruck againſt another hard body, will yield an exteriour ſound greater or leſſer: in ſo much as if the percuſſion be over-ſoft, it may induce a nullity of ſound; but never an interiour ſound; as when one treadeth ſo ſoftly that he is not heard.

190. WHERE the air is the percutient, pent or not pent againſt a hard body, it never giveth an exteriour ſound; as if you blow ſtrongly with a bellows againſt a wall.

191. SOUNDS (both exteriour and interiour) may be made as well by ſuction as by emiſſion of the breath: as in whiſtling or breathing.

*Experiments in conſort touching articulation of ſounds.*

192. IT is evident, and it is one of the ſtrangeſt ſecrets in ſounds, that the whole ſound is not in the whole air only; but the whole ſound is alſo in every ſmall part of the air. So that all the curious diverſity of articulate ſounds, of the voice of man or birds, will enter at a ſmall cranny inconfuſed.

193. THE unequal agitation of the winds and the like, though they be material to the carriage of the ſounds farther or leſs way; yet they do not confound the articulation of them at all, within that diſtance that they can be heard; though it may be, they make them to be heard leſs way than in a ſtill; as hath been partly touched.

194. OVER-great diſtance confoundeth the articulation of ſounds; as we ſee, that you may hear the ſound of a preacher's voice, or the like, when you cannot diſtinguiſh what he ſaith. And one articulate ſound will confound another, as when many ſpeak at once.

195. IN the experiment of ſpeaking under water, when the voice is reduced to ſuch an extreme exility, yet the articulate ſounds (which are the words) are not confounded, as hath been ſaid.

196. I conceive, that an extreme ſmall, or an extreme great ſound, cannot be articulate; but that the articulation requireth a mediocrity of ſound: for, that the extreme ſmall ſound confoundeth the articulation by contracting; and the great ſound by diſperſing: and although (as was formerly ſaid) a ſound articulate, already created, will be contracted into a ſmall cranny; yet the firſt articulation requireth more dimenſion.

197. IT hath been obſerved, that in a room, or in a chapel, vaulted below and vaulted likewiſe in the roof, a preacher cannot be heard ſo well, as in the like places not ſo vaulted. The cauſe is, for that the ſubſequent words come on, before the precedent words vaniſh: and therefore the articulate ſounds are more confuſed, though the groſs of the ſound be greater.

198. THE motions of the tongue, lips, throat, palate, *&c.* which go to the making of the ſeveral alphabetical letters, are worthy enquiry, and pertinent to

to the preſent inquiſition of ſounds: but becauſe they are ſubtle, and long to deſcribe, we will refer them over, and place them amongſt the experiments of ſpeech. The *Hebrews* have been diligent in it, and have aſſigned which letters are labial, which dental, which guttural, *&c.* As for the *Latins* and *Grecians*, they have diſtinguiſhed between ſemi-vowels and mutes; and in mutes, between *mutae tenues*, *mediae*, and *aſpiratae*; not amiſs, but yet not diligently enough. For the ſpecial ſtrokes and motions that create thoſe ſounds, they have little inquired: as that the letters *B*, *P*, *F*, *M*, are not expreſſed, but with the contracting or ſhutting of the mouth; that the letters *N* and *B*, cannot be pronounced, but that the letter *N* will turn into *M*. As *Hecatonba* will be *Hecatomba*. That *M* and *T* cannot be pronounced together, but *P* will come between; as *emtus* is pronounced *emptus*; and a number of the like. So that if you enquire to the full, you will find, that to the making of the whole alphabet, there will be fewer ſimple motions required, than there are letters.

199. THE lungs are the moſt ſpongy part of the body; and therefore ableſt to contract and dilate it ſelf; and where it contracteth it ſelf, it expelleth the air; which through the artery, throat, and mouth, maketh the voice: but yet articulation is not made but with the help of the tongue, palate, and the reſt of thoſe they call inſtruments of voice.

200. THERE is found a ſimilitude between the ſound that is made by inanimate bodies, or by animate bodies, that have no voice articulate; and divers letters of articulate voices: and commonly men have given ſuch names to thoſe ſounds, as do allude unto the articulate letters. As trembling of water hath reſemblance with the letter *L*; quenching of hot metals with the letter *Z*; ſnarling of dogs with the letter *R*; the noiſe of ſcreech-owls with the letter *Sh*; voice of cats with the diphthong *Eu*; voice of cuckows with the diphthong *Ou*; ſounds of ſtrings with the letters *Ng*: ſo that if a man (for curioſity or ſtrangeneſs ſake) would make a puppet or other dead body to pronounce a word; let him conſider on the one part, the motion of the inſtruments of voice; and on the other part the like ſounds made in inanimate bodies; and what conformity there is that cauſeth the ſimilitude of ſounds; and by that he may miniſter light to that effect.

# NATURAL HISTORY.

## CENT. III.

*Experiments in conſort touching the motions of ſounds, in what lines they are circular, oblique, ſtraight, upwards, downwards, forwards, backwards.*

201. ALL ſounds whatſoever move round; that is to ſay, on all ſides; upwards, downwards, forwards, and backwards. This appeareth in all inſtances.

202. SOUNDS do not require to be conveyed to the ſenſe in a right line, as viſibles do, but may be arched; though it be true, they move ſtrongeſt in a right line; which nevertheleſs is not cauſed by the rightneſs of the line, but by the ſhortneſs of the diſtance; *linea recta breviſſima.* And therefore we ſee if a wall be between, and you ſpeak on the one ſide, you hear it on the other; which is not becauſe the ſound paſſed through the wall, but archeth over the wall.

203. IF the ſound be ſtopped and repercuſſed, it cometh about on the other ſide in an oblique line. So if in a coach, one ſide of the boot be down, and the other up, and a begger beg on the cloſe ſide; you will think that he were on the open ſide. So likewiſe, if a bell or clock be (for example) on the north ſide of a chamber, and the window of that chamber be upon the ſouth; he that is in the chamber will think the ſound came from the ſouth.

240. SOUNDS, though they ſpread round, (ſo that there is an orb or ſpherical area of the ſound) yet they move ſtrongeſt, and go fartheſt in the fore-lines, from the firſt local impulſion of the air. And therefore in preaching, you ſhall hear the preacher's voice better before the pulpit, than behind it, or on the ſides, though it ſtand open. So a harquebuz, or ordnance, will be farther heard forwards from the mouth of the piece, than backwards, or on the ſides.

205. IT may be doubted, that ſounds do move better downwards than upwards. Pulpits are placed high above the people. And when the ancient generals ſpake to their armies, they had ever a mount of turf caſt up, whereupon they ſtood; but this may be imputed to the ſtops and obſtacles which the voice meeteth with, when one ſpeaketh upon the level. But there ſeemeth to be more in it; for it may be that ſpiritual ſpecies, both of things viſible and ſounds, do move better downwards than upwards. It is a ſtrange thing, that to men ſtanding below on the ground, thoſe that be on the top of *Paul*'s, ſeem much leſs than they are, and cannot be known; but to men above,

above, thoſe below ſeem nothing ſo much leſſened, and may be known: yet it is true, that all things to them above, ſeem alſo ſomewhat contracted and better collected into figure: as knots in gardens ſhew beſt from an upper window or terras.

206. But to make an exact trial of it, let a man ſtand in a chamber not much above the ground, and ſpeak out at the window through a trunk, to one ſtanding on the ground, as ſoftly as he can, the other laying his ear cloſe to the trunk: then *via verſa*, let the other ſpeak below keeping the ſame proportion of ſoftneſs; and let him in the chamber lay his ear to the trunk: and this may be the apteſt means to make a judgment, whether ſounds deſcend or aſcend better.

*Experiments in conſort touching the laſting and periſhing of ſounds; and touching the time they require to their generation or delation.*

207. After that ſound is created, (which is in a moment) we find it continueth ſome ſmall time, melting by little and little. In this there is a wonderful error amongſt men, who take this to be a continuance of the firſt ſound; whereas (in truth) it is a renovation, and not a continuance: for the body percuſſed, hath by reaſon of the percuſſion a trepidation wrought in the minute parts, and ſo reneweth the percuſſion of the air. This appeareth manifeſtly, becauſe that the melting ſound of a bell, or of a ſtring ſtrucken, which is thought to be a continuance, ceaſeth as ſoon as the bell or ſtring are touched. As in a virginal, as ſoon as ever the jack falleth, and toucheth the ſtring, the ſound ceaſeth; and in a bell, after you have chimed upon it, if you touch the bell the ſound ceaſeth. And in this you muſt diſtinguiſh that there are two trepidations: the one manifeſt and local; as of the bell when it is penſile: the other ſecret of the minute parts; ſuch as is deſcribed in the ninth inſtance. But it is true, that the local helpeth the ſecret greatly. We ſee likewiſe, that in pipes and other wind-inſtruments, the ſound laſteth no longer than the breath bloweth. It is true, that in organs there is a confuſed murmur for a while after you have played; but that is but while the bellows are in falling.

208. It is certain, that in the noiſe of great ordnance, where many are ſhot off together, the ſound will be carried (at the leaſt) twenty miles upon the land, and much farther upon the water. But then it will come to the ear, not in the inſtant of the ſhooting off, but it will come an hour or more later. This muſt needs be a continuance of the firſt ſound; for there is no trepidation which ſhould renew it. And the touching of the ordnance would not extinguiſh the ſound the ſooner: ſo that in great ſounds the continuance is more than momentany.

209. To try exactly the time wherein ſound is delated, let a man ſtand in a ſteeple, and have with him a taper; and let ſome vail be put before the taper; and let another man ſtand in the field a mile off. Then let him in the ſteeple ſtrike the bell; and in the ſame inſtant withdraw the vail; and ſo let him in the field tell by his pulſe what diſtance of time there is between the light ſeen, and the ſound heard: for it is certain that the delation of light is in an inſtant. This may be tried in far greater diſtances, allowing greater lights and ſounds.

210. It is generally known and obſerved, that light, and the object of ſight, move ſwifter than ſound; for we ſee a flaſh of a piece is ſeen ſooner, than the noiſe is heard. And in hewing wood, if one be ſome diſtance off, he ſhall ſee the arm lifted up for a ſecond ſtroke, before he hear the noiſe of the firſt. And the greater the diſtance, the greater is the prevention: as we ſee in thunder

thunder which is far off; where the lightning precedeth the crack a good ſpace.

211. COLOURS, when they repreſent themſelves to the eye, fade not, nor melt not by degrees, but appear ſtill in the ſame ſtrength; but ſounds melt and vaniſh by little and little. The cauſe is, for that colours participate nothing with the motion of the air, but ſounds do. And it is a plain argument that ſound participateth of ſome local motion of the air, (as a cauſe *ſine qua non*) in that it periſheth ſo ſuddenly; for in every ſection or impulſion of the air, the air doth ſuddenly reſtore and reunite it ſelf; which the water alſo doth, but not ſo ſwiftly.

*Experiments in conſort touching the paſſage and interception of ſounds.*

IN the trials of the paſſage, or not paſſage of ſounds, you muſt take heed you miſtake not the paſſing by the ſides of a body, for the paſſing through a body; and therefore you muſt make the intercepting body very cloſe; for ſound will paſs through a ſmall chink.

212. WHERE ſound paſſeth through a hard or cloſe body (as through water; through a wall; through metal, as in hawks bells ſtopped, *&c.*) the hard or cloſe body muſt be but thin and ſmall; for elſe it deadeth and extinguiſheth the ſound utterly. And therefore in the experiment of ſpeaking in air under water, the voice muſt not be very deep within the water: for then the ſound pierceth not. So if you ſpeak on the farther ſide of a cloſe wall, if the wall be very thick you ſhall not be heard: and if there were an hogſhead empty, whereof the ſides were ſome two foot thick, and the bunghole ſtopped; I conceive the reſounding ſound, by the communication of the outward air with the air within, would be little or none: but only you ſhall hear the noiſe of the outward knock, as if the veſſel were full.

213. It is certain, that in the paſſage of ſounds through hard bodies, the ſpirit or pneumatical part of the hard body it ſelf doth cooperate; but much better when the ſides of that hard body are ſtruck, than when the percuſſion is only within, without touch of the ſides. Take therefore a hawk's bell, the holes ſtopped up, and hang it by a thread within a bottle glaſs, and ſtop the mouth of the glaſs very cloſe with wax; and then ſhake the glaſs, and ſee whether the bell give any ſound at all, or how weak: but note, that you muſt inſtead of the thread take a wire; or elſe let the glaſs have a great belly; leſt when you ſhake the bell, it daſh upon the ſides of the glaſs.

214. IT is plain, that a very long and downright arch for the ſound to paſs, will extinguiſh the ſound quite; ſo that that ſound, which would be heard over a wall, will not be heard over a church; nor that ſound which will be heard, if you ſtand ſome diſtance from the wall, will be heard if you ſtand cloſe under the wall.

215. SOFT and foraminous bodies, in the firſt creation of the ſound, will dead it; for the ſtriking againſt cloth or furr will make little ſound; as hath been ſaid: but in the paſſage of the ſound, they will admit it better than harder bodies; as we ſee, that curtains and hangings will not ſtay the ſound much; but glaſs-windows, if they be very cloſe, will check a ſound more, than the like thickneſs of cloth. We ſee alſo in the rumbling of the belly, how eaſily the ſound paſſeth through the guts and ſkin.

216. IT is worthy the enquiry, whether great ſounds (as of ordnance or bells) become not more weak and exile when they paſs through ſmall crannies. For the ſubtilties of articulate ſounds, (it may be) may paſs through

ſmall crannies not confuſed; but the magnitude of the ſound (perhaps) not ſo well.

*Experiments in conſort touching the medium of ſounds.*

217. THE mediums of ſounds are air; ſoft and porous bodies; alſo water. And hard bodies refuſe not altogether to be mediums of ſounds. But all of them are dull and unapt deferents, except the air.

218. IN air, the thinner or drier air carrieth not the ſound ſo well as the more denſe; as appeareth in night ſounds and evening ſounds; and ſounds in moiſt weather and ſouthern winds. The reaſon is already mentioned in the title of majoration of ſounds; being for that thin air is better pierced; but thick air preſerveth the ſound better from waſte: let further trial be made by hollowing in miſts and gentle ſhowers; for (it may be) that will ſomewhat dead the ſound.

219. HOW far forth flame may be a medium of ſounds, (eſpecially of ſuch ſounds as are created by air, and not betwixt hard bodies) let it be tried in ſpeaking where a bonfire is between; but then you muſt allow for ſome diſturbance the noiſe that the flame it ſelf maketh.

220. WHETHER any other liquors being made mediums, cauſe a diverſity of ſound from water, it may be tried: as by the knapping of the tongs; or ſtriking the bottom of a veſſel, filled either with milk, or with oil; which though they be more light, yet are they more unequal bodies than air.

OF the natures of the mediums we have now ſpoken; as for the diſpoſition of the ſaid mediums, it doth conſiſt in the penning, or not penning of the air; of which we have ſpoken before in the title of delation of ſounds: it conſiſteth alſo in the figure of the concave through which it paſſeth; of which we will ſpeak next.

*Experiments in conſort, what the figures of the pipes or concaves of the bodies deferent conduce to the ſounds.*

HOW the figures of pipes, or concaves, through which ſounds paſs, or of other bodies deferent, conduce to the variety and alteration of the ſounds; either in reſpect of the greater quantity, or leſs quantity of air, which the concaves receive; or in reſpect of the carrying of ſounds longer and ſhorter way; or in reſpect of many other circumſtances; they have been touched, as falling into other titles. But thoſe figures which we now are to ſpeak of, we intend to be as they concern the lines through which ſound paſſeth; as ſtraight, crooked, angular, circular, *&c.*

221. THE figure of a bell partaketh of the pyramis, but yet coming off and dilating more ſuddenly. The figure of a hunter's horn and cornet, is oblique; yet they have likewiſe ſtraight horns; which if they be of the ſame bore with the oblique, differ little in ſound; ſave that the ſtraight require ſomewhat a ſtronger blaſt. The figures of recorders and flutes, and pipes are ſtraight; but the recorder hath a leſs bore and a greater; above and below. The trumpet hath the figure of the letter *S*: which maketh that purling ſound, *&c.* Generally the ſtraight line hath the cleaneſt and roundeſt ſound, and the crooked the more hoarſe and jarring.

222. OF a ſinuous pipe that may have ſome four flexions, trial would be made. Likewiſe of a pipe made like a croſs, open in the midſt. And ſo likewiſe of an angular pipe: and ſee what will be the effects of theſe ſeveral ſounds. And ſo again of a circular pipe; as if you take a pipe perfect round, and make a hole whereinto you ſhall blow, and another hole not far from that;

that; but with a traverſe or ſtop between them; ſo that your breath may go the round of the circle, and come forth at the ſecond hole. You may try likewiſe percuſſions of ſolid bodies of ſeveral figures; as globes, flats, cubes, croſſes, triangles, *&c.* and their combinations, as flat againſt flat, and convex againſt convex, and convex againſt flat, *&c.* and mark well the diverſities of the ſounds. Try alſo the difference in ſound of ſeveral craſſitudes of hard bodies percuſſed; and take knowledge of the diverſities of the ſounds. I my ſelf have tried, that a bell of gold yieldeth an excellent ſound, not inferiour to that of ſilver or braſs, but rather better: yet we ſee that a piece of money of gold ſoundeth far more flat than a piece of money of ſilver.

223. THE harp hath the concave not along the ſtrings, but acroſs the ſtrings; and no inſtrument hath the ſound ſo melting and prolonged, as the *Iriſh* harp. So as I ſuppoſe, that if a virginal were made with a double concave, the one all the length as the virginal hath; the other at the end of the ſtrings as the harp hath; it muſt needs make the ſound perfecter, and not ſo ſhallow and jarring. You may try it without any ſound-board along, but only harp-wiſe at one end of the ſtrings: or laſtly with a double concave at each end of the ſtrings one.

*Experiments in conſort touching the mixture of ſounds.*

224. THERE is an apparent diverſity between the ſpecies viſible and audible in this, that the viſible doth not mingle in the medium, but the audible doth. For if we look abroad, we ſee heaven, a number of ſtars, trees, hills, men, beaſts, at once. And the ſpecies of the one doth not confound the other. But if ſo many ſounds come from ſeveral parts, one of them would utterly confound the other. So we ſee, that voices or conſorts of muſick do make an harmony by mixture, which colours do not. It is true nevertheleſs, that a great light drowneth a ſmaller, that it cannot be ſeen; as the ſun that of a glow-worm; as well as a great ſound drowneth a leſſer. And I ſuppoſe likewiſe, that if there were two lanthorns of glaſs, the one a crimſon, and the other an azure, and a candle within either of them, thoſe coloured lights would mingle and caſt upon a white paper a purple colour. And even in colours, they yield a faint and weak mixture: for white walls make rooms more lightſome than black, *&c.* but the cauſe of the confuſion in ſounds, and the inconfuſion in ſpecies viſible, is, for that the ſight worketh in right lines, and maketh ſeveral cones; and ſo there can be no coincidence in the eye or viſual point: but ſounds that move in oblique and arcuate lines, muſt needs encounter and diſturb the one the other.

225. THE ſweeteſt and beſt harmony is, when every part or inſtrument is not heard by it ſelf, but a conflation of them all; which requireth to ſtand ſome diſtance off. Even as it is in the mixture of perfumes; or the taking of the ſmells of ſeveral flowers in the air.

226. THE diſpoſition of the air in other qualities, except it be joined with ſound, hath no great operation upon ſounds: for whether the air be lightſome or dark, hot or cold, quiet or ſtirring, (except it be with noiſe) ſweet-ſmelling, or ſtinking, or the like; it importeth not much: ſome petty alteration or difference it may make.

227. BUT ſounds do diſturb and alter the one the other: ſometimes the one drowning the other, and making it not heard; ſometimes the one jarring and diſcording with the other, and making a confuſion; ſometimes the one mingling and compounding with the other, and making an harmony.

228. Two voices of like loudneſs, will not be heard twice as far as one

of them alone; and two candles of like light, will not make things ſeem twice as far off as one. The cauſe is profound; but it ſeemeth that the impreſſions from the objects of the ſenſes do mingle reſpectively, every one with his kind; but not in proportion, as is before demonſtrated: and the reaſon may be, becauſe the firſt impreſſion, which is from privative to active, (as from ſilence to noiſe, or from darkneſs to light) is a greater degree, than from leſs noiſe to more noiſe, or from leſs light to more light. And the reaſon of that again may be, for that the air, after it hath received a charge, doth not receive a ſurcharge, or greater charge, with like appetite as it doth the firſt charge. As for the increaſe of virtue, generally, what proportion it beareth to the increaſe of the matter, it is a large field, and to be handled by it ſelf.

*Experiments in conſort touching melioration of ſounds.*

229. All reflexions concurrent do make ſounds greater; but if the body that createth either the original ſound, or the reflexion, be clean and ſmooth, it maketh them ſweeter. Trial may be made of a lute or viol, with the belly of poliſhed braſs inſtead of wood. We ſee that even in the open air, the wire ſtring is ſweeter than the ſtring of guts. And we ſee that for reflexion water excelleth; as in muſick near the water; or in echo's.

230. It hath been tried, that a pipe a little moiſten'd on the inſide, but yet ſo as there be no drops left, maketh a more ſolemn ſound, than if the pipe were dry: but yet with a ſweet degree of ſibilation or purling; as we touched it before in the title of equality. The cauſe is, for that all things porous being ſuperficially wet, and (as it were) between dry and wet, become a little more even and ſmooth; but the purling (which muſt needs proceed of inequality) I take to be bred between the ſmoothneſs of the inward ſurface of the pipe, which is wet; and the reſt of the wood of the pipe unto which the wet cometh not, but it remaineth dry.

231. In froſty weather muſick within doors ſoundeth better. Which may be by reaſon not of the diſpoſition of the air, but of the wood or ſtring of the inſtrument, which is made more criſp, and ſo more porous and hollow: and we ſee that old lutes ſound better than new for the ſame reaſon. And ſo do lute-ſtrings that have been kept long.

232. Sound is likewiſe meliorated by the mingling of open air with pent air; therefore trial may be made of a lute or viol with a double belly; making another belly with a knot over the ſtrings; yet ſo, as there be room enough for the ſtrings, and room enough to play below that belly. Trial may be made alſo of an *Iriſh* harp, with a concave on both ſides; whereas it uſeth to have it but on one ſide. The doubt may be, leſt it ſhould make too much reſounding; whereby one note would overtake another.

233. If you ſing in the hole of a drum, it maketh the ſinging more ſweet. And ſo I conceive it would, if it were a ſong in parts ſung into ſeveral drums; and for handſomeneſs and ſtrangeneſs ſake, it would not be amiſs to have a curtain between the place where the drums are and the hearers.

234. When a ſound is created in a wind-inſtrument between the breath and the air, yet if the ſound be communicated with a more equal body of the pipe, it meliorateth the ſound. For (no doubt) there would be a differing ſound in a trumpet or pipe of wood; and again in a trumpet or pipe of braſs. It were good to try recorders and hunters horns of braſs, what the ſound would be.

235. Sounds are meliorated by the intenſion of the ſenſe, where the com-

mon

mon ſenſe is collected moſt to the particular ſenſe of hearing, and the ſight ſuſpended: and therefore ſounds are ſweeter (as well as greater) in the night, than in the day; and I ſuppoſe they are ſweeter to blind men than to others: and it is manifeſt that between ſleeping and waking (when all the ſenſes are bound and ſuſpended) muſick is far ſweeter, than when one is fully waking.

*Experiments in conſort touching the imitation of ſounds.*

236. IT is a thing ſtrange in nature when it is attentively conſidered, how children, and ſome birds, learn to imitate ſpeech. They take no mark (at all) of the motion of the mouth of him that ſpeaketh, for birds are as well taught in the dark as by light. The ſounds of ſpeech are very curious and exquiſite: ſo one would think it were a leſſon hard to learn. It is true that it is done with time, and by little and little, and with many eſſays and profers: but all this diſchargeth not the wonder. It would make a man think (though this which we ſhall ſay may ſeem exceeding ſtrange) that there is ſome tranſmiſſion of ſpirits; and that the ſpirits of the teacher put in motion, ſhould work with the ſpirits of the learner a pre-diſpoſition to offer to imitate; and ſo to perfect the imitation by degrees. But touching operations by tranſmiſſions of ſpirits, (which is one of the higheſt ſecrets in nature) we ſhall ſpeak in due place; chiefly when we come to inquire of imagination. But as for imitation, it is certain that there is in men and other creatures a pre-diſpoſition to imitate. We ſee how ready apes and monkeys are, to imitate all motions of man; and in the catching of dottrels, we ſee how the fooliſh bird playeth the ape in geſtures: and no man (in effect) doth accompany with others, but he learneth (ere he is aware) ſome geſture, or voice, or faſhion of the other.

237. IN imitation of ſounds, that man ſhould be the teacher is no part of the matter; for birds will learn one of another; and there is no reward by feeding, or the like, given them for the imitation; and beſides, you ſhall have parrots that will not only imitate voices, but laughing, knocking, ſqueaking of a door upon the hinges, or of a cart-wheel; and (in effect) any other noiſe they hear.

238. No beaſt can imitate the ſpeech of man but birds only; for the ape it ſelf, that is ſo ready to imitate otherwiſe, attaineth not any degree of imitation of ſpeech. It is true, that I have known a dog, that if one howled in his ear, he would fall a howling a great while. What ſhould be the aptneſs of birds in compariſon of beaſts, to imitate the ſpeech of man, may be further enquired. We ſee that beaſts have thoſe parts which they count the inſtruments of ſpeech, (as lips, teeth, *&c.*) liker unto man than birds. As for the neck by which the throat paſſeth, we ſee many beaſts have it for the length as much as birds. What better gorge or attire birds have, may be farther enquired. The birds that are known to be ſpeakers, are parrots, pies, jays, daws and ravens. Of which parrots have an adunque bill, but the reſt not.

239. BUT I conceive, that the aptneſs of birds is not ſo much in the conformity of the organs of ſpeech, as in their attention. For ſpeech muſt come by hearing and learning; and birds give more heed, and mark ſounds more than beaſts; becauſe naturally they are more delighted with them, and practiſe them more, as appeareth in their ſinging. We ſee alſo that thoſe that teach birds to ſing, do keep them waking to increaſe their attention. We

ſee alſo, that cock birds amongſt ſinging birds are ever the better ſingers; which may be becauſe they are more lively and liſten more.

240. Labour and intention to imitate voices, doth conduce much to imitation: and therefore we ſee that there be certain *Pantomimi*, that will repreſent the voices of players of interludes ſo to life, as if you ſee them not you would think they were thoſe players themſelves, and ſo the voices of other men that they hear.

241. There have been ſome that could counterfeit the diſtance of voices, (which is a ſecondary object of hearing) in ſuch ſort, as when they ſtand faſt by you, you would think the ſpeech came from afar off in a fearful manner. How this is done may be further enquired. But I ſee no great uſe of it but for impoſture, in counterfeiting ghoſts or ſpirits.

*Experiments in conſort touching the reflexion of ſounds.*

There be three kinds of reflexion of ſounds; a reflexion concurrent, a reflexion iterant, which we call echo; and a ſuper-reflexion, or an echo of an echo, whereof the firſt hath been handled in the title of magnitude of ſounds: the latter two we will now ſpeak of.

242. The reflexion of ſpecies viſible by mirrours you may command; becauſe paſſing in right lines they may be guided to any point: but the reflexion of ſounds is hard to maſter; becauſe the ſound filling great ſpaces in arched lines, cannot be ſo guided: and therefore we ſee there hath not been practiſed any means to make artificial echo's. And no echo already known returneth in a very narrow room.

243. The natural echo's are made upon walls, woods, rocks, hills and banks; as for waters being near, they make a concurrent echo; but being farther off (as upon a large river) they make an iterant echo: for there is no difference between the concurrent echo and the iterant, but the quickneſs or flowneſs of the return. But there is no doubt but water doth help the delation of echo; as well as it helpeth the delation of original ſounds.

244. It is certain, (as hath been formerly touched) that if you ſpeak through a trunk ſtopped at the farther end, you ſhall find a blaſt return upon your mouth, but no ſound at all. The cauſe is, for that the cloſeneſs which preſerveth the original, is not able to preſerve the reflected ſound: beſides that echo's are ſeldom created but by loud ſounds. And therefore there is leſs hope of artificial echo's in air, pent in a narrow concave. Nevertheleſs it hath been tried, that one leaning over a well of 25 fathom deep, and ſpeaking, though but ſoftly, (yet not ſo ſoft as a whiſper) the water returned a good audible echo. It would be tried, whether ſpeaking in caves, where there is no iſſue ſave where you ſpeak, will not yield echo's as wells do.

245. The echo cometh as the original ſound doth, in a round orb of air: it were good to try the creating of the echo, where the body repercuſſing maketh an angle: as againſt the return of a wall, *&c.* Alſo we ſee that in mirrours there is the like angle of incidence, from the object of the glaſs, and from the glaſs to the eye. And if you ſtrike a ball ſide-long, not full upon the ſurface, the rebound will be as much the contrary way; whether there be any ſuch reſilience in echo's, (that is, whether a man ſhall hear better if he ſtand aſide the body repercuſſing, than if he ſtand where he ſpeaketh, or any where in a right line between) may be tried. Trial likewiſe would be made, by ſtanding nearer the place of repercuſſing than he that ſpeaketh; and again by ſtanding farther off than he that ſpeaketh; and ſo

knowledge

knowledge would be taken, whether echo's as well as original ſounds, be not ſtrongeſt near hand.

246. THERE be many places where you ſhall hear a number of echo's one after another: and it is when there is variety of hills or woods, ſome nearer, ſome farther off: ſo that the return from the farther being laſt created, will be likewiſe laſt heard.

247. As the voice goeth round, as well towards the back, as towards the front of him that ſpeaketh; ſo likewiſe doth the echo: for you have many back echo's to the place where you ſtand.

248. To make an echo that will report three, or four, or five words diſtinctly, it is requiſite that the body repercuſſing be a good diſtance off: for if it be near, and yet not ſo near as to make a concurrent echo, it choppeth with you upon the ſudden. It is requiſite likewiſe that the air be not much pent: For air at a great diſtance pent, worketh the ſame effect with air at large in a ſmall diſtance. And therefore in the trial of ſpeaking in the well, though the well was deep, the voice came back ſuddenly, and would bear the report but of two words.

249. FOR echo's upon echo's, there is a rare inſtance thereof in a place, which I will now exactly deſcribe. It is ſome three or four miles from *Paris*, near a town called *Pont-Charenton*; and ſome bird-bolt-ſhot or more from the river of *Sein*. The room is a chapel or ſmall church. The walls all ſtanding, both at the ſides and at the ends. Two rows of pillars, after the manner of iſles of churches, alſo ſtanding; the roof all open, not ſo much as any embowment near any of the walls left. There was againſt every pillar a ſtack of billets above a man's height; which the watermen that bring wood down the *Sein* in ſacks, and not in boats, laid there (as it ſeemeth) for their eaſe. Speaking at the one end, I did hear it return the voice thirteen ſeveral times; and I have heard of others, that it would return ſixteen times: for I was there about three of the clock in the afternoon: and it is beſt (as all other echo's are) in the evening. It is manifeſt that it is not echo's from ſeveral places, but a toſſing of the voice as a ball to and fro; like to reflexions in looking-glaſſes, where if you place one glaſs before and another behind, you ſhall ſee the glaſs behind with the image, within the glaſs before; and again, the glaſs before in that; and divers ſuch ſuper-reflexions, till the *ſpecies ſpeciei* at laſt die. For it is every return weaker and more ſhady. In like manner the voice in that chapel created *ſpeciem ſpeciei*, and maketh ſucceeding ſuper-reflexions; for it melteth by degrees, and every reflexion is weaker than the former: ſo that if you ſpeak three words, it will (perhaps) ſome three times report you the whole three words; and then the two latter words for ſome times; and then the laſt word alone for ſome times; ſtill fading and growing weaker. And whereas in echo's of one return, it is much to hear four or five words; in this echo of ſo many returns upon the matter, you hear above twenty words for three.

250. THE like echo upon echo, but only with two reports, hath been obſerved to be, if you ſtand between a houſe and a hill, and lure towards the hill. For the houſe will give a back echo, one taking it from the other, and the latter the weaker.

251. THERE are certain letters that an echo will hardly expreſs; as *S* for one, eſpecially being principal in a word. I remember well, that when I went to the echo at *Pont-Charenton*, there was an old *Pariſian*, that took it to be the work of ſpirits, and of good ſpirits. For (ſaid he) call *Satan*, and the echo will not deliver back the devil's name; but will ſay *ſat'en*; which is

as much in *French* as *apage*, or avoid. And thereby I did hap to find, that an echo would not return *S*, being but a hiſſing and an interiour ſound.

252. Echo's are ſome more ſudden, and chop again as ſoon as the voice is delivered; as hath been partly ſaid: others are more deliberate, that is, give more ſpace between the voice and the echo; which is cauſed by the local nearneſs or diſtance: ſome will report a longer train of words; and ſome a ſhorter: ſome more loud (full as loud as the original, and ſometimes more loud) and ſome weaker and fainter.

253. Where echo's come from ſeveral parts at the ſame diſtance, they muſt needs make (as it were) a quire of echo's, and ſo make the report greater, and even a continued echo; which you ſhall find in ſome hills that ſtand encompaſſed theatre-like.

254. It doth not yet appear that there is refraction in ſounds, as well as in ſpecies viſible. For I do not think, that if a ſound ſhould paſs through divers mediums, (as air, cloth, wood) it would deliver the ſound in a different place from that unto which it is deferred; which is the proper effect of refraction. But majoration, which is alſo the work of refraction, appeareth plainly in ſounds, (as hath been handled at full) but it is not by diverſity of mediums.

*Experiments in conſort touching the conſent and diſſent between viſibles and audibles.*

We have *obiter*, for demonſtration ſake, uſed in divers inſtances the examples of the ſight and things viſible, to illuſtrate the nature of ſounds: But we think good now to proſecute that compariſon more fully.

*Conſent of viſibles and audibles.*

255. Both of them ſpread themſelves in round, and fill a whole floor or orb unto certain limits: and are carried a great way: and do languiſh and leſſen by degrees, according to the diſtance of the objects from the ſenſories.

256. Both of them have the whole ſpecies in every ſmall portion of the air or medium, ſo as the ſpecies do paſs through ſmall crannies without confuſion: as we ſee ordinarily in levels, as to the eye; and in crannies or chinks as to the ſound.

257. Both of them are of a ſudden and eaſy generation and delation; and likewiſe periſh ſwiftly and ſuddenly; as if you remove to the light, or touch the bodies that give the ſound.

258. Both of them do receive and carry exquiſite and accurate differences; as of colours, figures, motions, diſtances, in viſibles; and of articulate voices, tones, ſongs and quaverings, in audibles.

259. Both of them in their virtue and working, do not appear to emit any corporal ſubſtance into their mediums, or the orb of their virtue; neither again to riſe or ſtir any evident local motion in their mediums as they paſs, but only to carry certain ſpiritual ſpecies; the perfect knowledge of the cauſe whereof being hitherto ſcarcely attained, we ſhall ſearch and handle in due place.

260. Both of them ſeem not to generate or produce any other effect in nature, but ſuch as appertaineth to their proper objects and ſenſes, and are otherwiſe barren.

261. But both of them in their own proper action, do work three manifeſt effects. The firſt, in that the ſtronger ſpecies drowneth the leſſer; as the light of the ſun, the light of a glow-worm; the report of an ordnance, the

voice: The ſecond, in that an object of ſurcharge or exceſs deſtroyeth the ſenſe, as the light of the ſun the eye; a violent ſound (near the ear) the hearing: the third, in that both of them will be reverberated; as in mirrours, and in echo's.

262. NEITHER of them doth deſtroy or hinder the ſpecies of the other, although they encounter in the ſame medium; as light or colour hinder not ſound, nor *e contra*.

263. BOTH of them affect the ſenſe in living creatures, and yield objects of pleaſure and diſlike: yet nevertheleſs the objects of them do alſo (if it be well obſerved) affect and work upon dead things; namely ſuch as have ſome conformity with the organs of the two ſenſes; as viſibles work upon a looking-glaſs, which is like the pupil of the eye; and audibles upon the places of echo, which reſemble in ſome ſort the cavern and ſtructure of the ear.

264. BOTH of them do diverſly work, as they have their medium diverſly diſpoſed. So a trembling medium (as ſmoak) maketh the object ſeem to tremble; and a riſing or falling medium (as winds) maketh the ſounds to riſe or fall.

265. To both, the medium, which is the moſt propitious and conducible, is air; for glaſs or water, *&c.* are not comparable.

266. IN both of them, where the object is fine and accurate, it conduceth much to have the ſenſe intentive and erect; in ſo much as you contract your eye when you would ſee ſharply; and erect your ear when you would hear attentively; which in beaſts that have ears moveable is moſt manifeſt.

267. THE beams of light, when they are multiplied and conglomerate, generate heat; which is a different action from the action of ſight: and the multiplication and conglomeration of ſounds doth generate an extreme rarefaction of the air; which is an action materiate, differing from the action of ſound; if it be true (which is anciently reported) that birds with great ſhouts have fallen down.

### *Diſſents of viſibles and audibles.*

268. THE ſpecies of viſibles ſeem to be emiſſions of beams from the object ſeen, almoſt like odours, ſave that they are more incorporeal: but the ſpecies of audibles ſeem to participate more with local motion, like percuſſions, or impreſſions made upon the air. So that whereas all bodies do ſeem to work in two manners, either by the communication of their natures, or by the impreſſions and ſignatures of their motions; the diffuſion of ſpecies viſible ſeemeth to participate more of the former operation, and the ſpecies audible of the latter.

269. THE ſpecies of audibles ſeem to be carried more manifeſtly through the air than the ſpecies of viſibles: for (I conceive) that a contrary ſtrong wind will not much hinder the ſight of viſibles, as it will do the hearing of ſounds.

270. THERE is one difference above all others between viſibles and audibles, that is the moſt remarkable; as that whereupon many ſmaller differences do depend: namely, that viſibles (except lights) are carried in right lines, and audibles in arcuate lines. Hence it cometh to paſs, that viſibles do not intermingle and confound one another, as hath been ſaid before; but ſounds do. Hence it cometh, that the ſolidity of bodies doth not much hinder the ſight, ſo that the bodies be clear, and the pores in a right line, as in glaſs,

cryſtal, diamonds, water, *&c.* but a thin ſcarf or handkerchief, though they be bodies nothing ſo ſolid, hinder the ſight: whereas (contrariwiſe) theſe porous bodies do not much hinder the hearing, but ſolid bodies do almoſt ſtop it, or at the leaſt attenuate it. Hence alſo it cometh, that to the reflexion of viſibles ſmall glaſſes ſuffice; but to the reverberation of audibles are required greater ſpaces, as hath likewiſe been ſaid before.

271. Visibles are ſeen farther off than ſounds are heard; allowing nevertheleſs the rate of their bigneſs: for otherwiſe a great ſound will be heard farther off, than a ſmall body ſeen.

272. Visibles require (generally) ſome diſtance between the object and the eye, to be better ſeen; whereas in audibles, the nearer the approach of the ſound is to the ſenſe, the better. But in this there may be a double error. The one becauſe to ſeeing there is required light; and any thing that toucheth the pupil of the eye (all over) excludeth the light. For I have heard of a perſon very credible, (who himſelf was cured of a cataract in one of his eyes) that while the ſilver needle did work upon the ſight of his eye, to remove the film of the cataract, he never ſaw any thing more clear or perfect than that white needle: which (no doubt) was, becauſe the needle was leſſer than the pupil of the eye, and ſo took not the light from it. The other error may be, for that the object of ſight doth ſtrike upon the pupil of the eye directly without any interception; whereas the cave of the ear doth hold off the ſound a little from the organ: and ſo nevertheleſs there is ſome diſtance required in both.

273. Visibles are ſwiftlier carried to the ſenſe than audibles; as appeareth in thunder and lightning, flame and report of a piece, motion of the air in hewing of wood. All which have been ſet down heretofore, but are proper for this title.

274. I conceive alſo, that the ſpecies of audibles do hang longer in the air than thoſe of viſibles: for although even thoſe of viſibles do hang ſome time, as we ſee in rings turned, that ſhew like ſpheres; in lute-ſtrings fillipped; a fire-brand carried along, which leaveth a train of light behind it; and in the twilight; and the like: yet I conceive that ſounds ſtay longer, becauſe they are carried up and down with the wind; and becauſe of the diſtance of the time in ordnance diſcharged, and heard twenty miles off.

275. In viſibles there are not found objects ſo odious and ingrate to the ſenſe as in audibles. For foul ſights do rather diſpleaſe, in that they excite the memory of foul things, than in the immediate objects. And therefore in pictures, thoſe foul ſights do not much offend; but in audibles, the grating of a ſaw, when it is ſharpned, doth offend ſo much, as it ſetteth the teeth on edge. And any of the harſh diſcords in muſick the ear doth ſtraightways refuſe.

276. In viſibles, after great light, if you come ſuddenly into the dark, or contrariwiſe, out of the dark into a glaring light, the eye is dazled for a time, and the ſight confuſed; but whether any ſuch effect be after great ſounds, or after a deep ſilence, may be better enquired. It is an old tradition, that thoſe that dwell near the cataracts of *Nilus*, are ſtrucken deaf: but we find no ſuch effect in cannoniers nor millers, nor thoſe that dwell upon bridges.

272. It ſeemeth that the impreſſion of colour is ſo weak, as it worketh not but by a cone of direct beams, or right lines; whereof the baſis is in the object, and the vertical point in the eye; ſo as there is a corradiation and conjunction of beams; and thoſe beams ſo ſent forth, yet are not of any force to

beget the like borrowed or ſecond beams, except it be by reflexion, whereof we ſpeak not. For the beams paſs, and give little tincture to that air which is adjacent; which if they did, we ſhould ſee colours out of a right line. But as this is in colours, ſo otherwiſe it is in the body of light. For when there is a ſkreen between the candle and the eye, yet the light paſſeth to the paper whereon one writeth; ſo that the light is ſeen where the body of the flame is not ſeen; and where any colour (if it were placed where the body of the flame is) would not be ſeen. I judge that ſound is of this latter nature: for when two are placed on both ſides of a wall, and the voice is heard, I judge it is not only the original ſound which paſſed in an arched line; but the ſound which paſſeth above the wall in a right line, begetteth the like motion round about it as the firſt did, though more weak.

*Experiments in conſort touching the ſympathy or antipathy of ſounds one with another.*

278. ALL concords and diſcords of muſick, are (no doubt) ſympathies and antipathies of ſounds. And ſo (likewiſe) in that muſick which we call broken muſick or conſort muſick, ſome conſorts of inſtruments are ſweeter than others; (a thing not ſufficiently yet obſerved:) as the *Iriſh* harp and baſe viol agree well: the recorder and ſtringed muſick agree well: organs and the voice agree well, *&c.* But the virginals and the lute; or the *Welſh* harp and *Iriſh* harp; or the voice and pipes alone, agree not ſo well; but for the melioration of muſick, there is yet much left (in this point of exquiſite conſorts) to try and enquire.

279. THERE is a common obſervation, that if a lute or viol be laid upon the back, with a ſmall ſtraw upon one of the ſtrings; and another lute or viol be laid to it; and in the other lute or viol, the uniſon to that ſtring be ſtrucken, it will make the ſtring move; which will appear both to the eye, and by the ſtraws falling off. The like will be, if the *diapaſon* or eight to that ſtring be ſtrucken, either in the ſame lute or viol, or in others lying by; but in none of theſe there is any report of ſound that can be diſcerned, but only motion.

280. IT was deviſed, that a viol ſhould have a lay of wire-ſtrings below, as cloſe to the belly as the lute; and then the ſtrings of guts mounted upon a bridge as in ordinary viols: to the end that by this means the upper ſtrings ſtrucken, ſhould make the lower reſound by ſympathy, and ſo make the muſick the better; which, if it be to purpoſe, then ſympathy worketh, as well by report of ſound as by motion. But this device I conceive to be of no uſe, becauſe the upper ſtrings which are ſtopped in great variety, cannot maintain a *diapaſon* or uniſon with the lower, which are never ſtopped. But if it ſhould be of uſe at all, it muſt be in inſtruments which have no ſtops; as virginals and harps; wherein trial may be made of two rows of ſtrings, diſtant the one from the other.

281. THE experiment of ſympathy may be transferred (perhaps) from inſtruments of ſtrings, to other inſtruments of ſound. As to try if there were in one ſteeple two bells of uniſon, whether the ſtriking of the one would move the other, more than if it were another accord: and ſo in pipes (if they be of equal bore and ſound) whether a little ſtraw or feather would move in the one pipe, when the other is blown at an uniſon.

282. IT ſeemeth both in ear and eye, the inſtrument of ſenſe hath a ſympathy or ſimilitude with that which giveth the reflexion; (as hath been touched before:)

before:) for as the ſight of the eye is like a cryſtal, or glaſs, or water; ſo is the ear a ſinuous cave, with a hard bone, to ſtop and reverberate the ſound: which is like to the places that report echoes.

*Experiments in conſort touching the hindring or helping of the hearing.*

283. When a man yawneth, he cannot hear ſo well. The cauſe is, for that the membrane of the ear is extended; and ſo rather caſteth off the ſound than draweth it to.

284. We hear better when we hold our breath than contrary; in ſo much as in all liſtening to attain a ſound afar off, men hold their breath. The cauſe is, for that in all expiration the motion is outwards; and therefore rather driveth away the voice than draweth it: and beſides we ſee, that in all labour to do things with any ſtrength, we hold the breath; and liſtening after any ſound that is heard with difficulty, is a kind of labour.

285. Let it be tried, for the help of the hearing, (and I conceive it likely to ſucceed) to make an inſtrument like a tunnel; the narrow part whereof may be of the bigneſs of the hole of the ear; and the broader end much larger, like a bell at the ſkirts; and the length half a foot or more. And let the narrow end of it be ſet cloſe to the ear: and mark whether any ſound, abroad in the open air, will not be heard diſtinctly from farther diſtance, than without that inſtrument; being (as it were) an ear-ſpectacle. And I have heard there is in *Spain* an inſtrument in uſe to be ſet to the ear, that helpeth ſomewhat thoſe that are thick of hearing.

286. If the mouth be ſhut cloſe, nevertheleſs there is yielded by the roof of the mouth a murmur; ſuch as is uſed by dumb men. But if the noſtrils be likewiſe ſtopped, no ſuch murmur can be made: except it be in the bottom of the palate towards the throat. Whereby it appeareth manifeſtly, that a ſound in the mouth, except ſuch as aforeſaid if the mouth be ſtopped, paſſeth from the palate through the noſtrils.

*Experiments in conſort touching the ſpiritual and fine nature of ſounds.*

287. The repercuſſion of ſounds (which we call echo) is a great argument of the ſpiritual eſſence of ſounds. For if it were corporeal, the repercuſſion ſhould be created in the ſame manner, and by like inſtruments with the original ſound: but we ſee what a number of exquiſite inſtruments muſt concur in ſpeaking of words, whereof there is no ſuch matter in the returning of them, but only a plain ſtop and repercuſſion.

288. The exquiſite differences of articulate ſounds, carried along in the air, ſhew that they cannot be ſignatures or impreſſions in the air, as hath been well refuted by the ancients. For it is true, that ſeals make excellent impreſſions; and ſo it may be thought of ſounds in their firſt generation: but then the delation and continuance of them without any new ſealing, ſhew apparently they cannot be impreſſions.

289. All ſounds are ſuddenly made, and do ſuddenly periſh; but neither that nor the exquiſite differences of them, is matter of ſo great admiration: for the quaverings and warblings in lutes and pipes are as ſwift; and the tongue (which is no very fine inſtrument) doth in ſpeech make no fewer motions than there be letters in all the words which are uttered. But that ſounds ſhould not only be ſo ſpeedily generated, but carried ſo far every way in ſuch a momentany time, deſerveth more admiration. As for example; if a man ſtand in the middle of a field and ſpeak aloud, he ſhall be heard a furlong in round;

round; and that ſhall be in articulate ſounds; and thoſe ſhall be entire in every little portion of the air; and this ſhall be done in the ſpace of leſs than a minute.

290. THE ſudden generation and periſhing of ſounds, muſt be one of theſe two ways. Either that the air ſuffereth ſome force by ſound, and then reſtoreth it ſelf as water doth; which being divided, maketh many circles, till it reſtore it ſelf to the natural conſiſtence: or otherwiſe, that the air doth willingly imbibe the ſound as grateful, but cannot maintain it; for that the air hath (as it ſhould ſeem) a ſecret and hidden appetite of receiving the ſound at the firſt; but then other groſs and more materiate qualities of the air ſtraightways ſuffocate it; like unto flame, which is generated with alacrity, but ſtraight quenched by the enmity of the air or other ambient bodies.

THERE be theſe differences (in general) by which ſounds are divided: 1. Muſical, immuſical. 2. Treble, baſe. 3. Flat, ſharp. 4. Soft, loud. 5. Exteriour, interiour. 6. Clean, harſh or purling. 7. Articulate, inarticulate.

WE have laboured (as may appear) in this inquiſition of ſounds diligently; both becauſe ſound is one of the moſt hidden portions of nature, (as we ſaid in the beginning;) and becauſe it is a virtue which may be called incorporeal and immateriate; whereof there be in nature but few. Beſides, we were willing (now in theſe our firſt centuries) to make a pattern or precedent of an exact inquiſition; and we ſhall do the like hereafter in ſome other ſubjects which require it. For we deſire that men ſhould learn and perceive, how ſevere a thing the true inquiſition of nature is; and ſhould accuſtom themſelves by the light of particulars, to enlarge their minds to the amplitude of the world, and not reduce the world to the narrowneſs of their minds.

*Experiment ſolitary touching the orient colours in diſſolution of metals.*

291. METALS give orient and fine colours and diſſolutions; as gold giveth an excellent yellow; quickſilver an excellent green; tin giveth an excellent azure; likewiſe in their putrefactions or ruſts; as vermilion, verdegreaſe, biſe, cirrus, *&c.* and likewiſe in their vitrifications. The cauſe is, for that by their ſtrength of body they are able to endure the fire or ſtrong waters, and to be put into an equal poſture; and again to retain part of their principal ſpirit; which two things (equal poſture and quick ſpirits) are required chiefly to make colours lightſome.

*Experiment ſolitary touching prolongation of life.*

292. IT conduceth unto long life, and to the more placid motion of the ſpirits, which thereby do leſs prey and conſume the juice of the body; either that mens actions be free and voluntary, that nothing be done *invita Minerva*, but *ſecundum genium*: or on the other ſide, that the actions of men be full of regulation and commands within themſelves: for then the victory and performing of the command giveth a good diſpoſition to the ſpirits; eſpecially if there be a proceeding from degree to degree; for then the ſenſe of victory is the greater. An example of the former of theſe is in a countrey life; and of the latter in monks and philoſophers, and ſuch as do continually enjoin themſelves.

*Experiment ſolitary touching appetite of union in bodies.*

293. IT is certain that in all bodies there is an appetite of union, and evitation

tation of ſolution of continuity: and of this appetite there be many degrees; but the moſt remarkable and fit to be diſtinguiſhed are three. The firſt in liquors; the ſecond in hard bodies; and the third in bodies cleaving or tenacious. In liquors this appetite is weak: we ſee in liquors, the thredding of them in ſtillicides (as hath been ſaid;) the falling of them in round drops (which is the form of union) and the ſtaying of them for a little time in bubbles and froth. In the ſecond degree or kind, this appetite is ſtrong; as in iron, in ſtone, in wood, *&c.* In the third, this appetite is in a medium between the other two: for ſuch bodies do partly follow the touch of another body, and partly ſtick and continue to themſelves; and therefore they rope and draw themſelves in threads; as we ſee in pitch, glue, birdlime, *&c.* But note, that all ſolid bodies are cleaving more or leſs: and that they love better the touch of ſomewhat that is tangible, than of air. For water in ſmall quantity cleaveth to any thing that is ſolid; and ſo would metal too, if the weight drew it not off. And therefore gold foliate, or any metal foliate, cleaveth: but thoſe bodies which are noted to be clammy and cleaving, are ſuch as have a more indifferent appetite (at once) to follow another body, and to hold to themſelves. And therefore they are commonly bodies ill mixed; and which take more pleaſure in a foreign body, than in preſerving their own conſiſtence; and which have little predominance in drought or moiſture.

*Experiment ſolitary touching the like operations of heat and time.*

294. TIME and heat are fellows in many effects. Heat drieth bodies that do eaſily expire; as parchment, leaves, roots, clay, *&c.* And ſo doth time or age arefy; as in the ſame bodies, *&c.* Heat diſſolveth and melteth bodies that keep in their ſpirits; as in divers liquefactions; and ſo doth time in ſome bodies of a ſofter conſiſtence: as is manifeſt in honey, which by age waxeth more liquid; and the like in ſugar; and ſo in old oil, which is ever more clear and more hot in medicinable uſe. Heat cauſeth the ſpirits to ſearch ſome iſſue out of the body; as in the volatility of metals; and ſo doth time; as in the ruſt of metals. But generally heat doth that in a ſmall time, which age doth in long.

*Experiment ſolitary touching the different operations of fire and time.*

295. SOME things which paſs the fire are ſofteſt at firſt, and by time grow hard, as the crumb of bread. Some are harder when they come from the fire, and afterwards give again, and grow ſoft, as the cruſt of bread, biſket, ſweet meats, ſalt, *&c.* The cauſe is, for that in thoſe things which wax hard with time, the work of the fire is a kind of melting: and in thoſe that wax ſoft with time, (contrariwiſe) the work of the fire is a kind of baking; and whatſoever the fire baketh, time doth in ſome degree diſſolve.

*Experiment ſolitary touching motions by imitation.*

296. MOTIONS paſs from one man to another, not ſo much by exciting imagination, as by invitation; eſpecially if there be an aptneſs or inclination before. Therefore gaping, or yawning, and ſtretching do paſs from man to man; for that that cauſeth gaping and ſtretching is, when the ſpirits are a little heavy by any vapour, or the like. For then they ſtrive (as it were) to wring out and expel that which loadeth them. So men drowſy, and deſirous to ſleep, or before the fit of an ague, do uſe to yawn and ſtretch; and do likewiſe

likewiſe yield a voice or ſound, which is an interjection of expulſion: ſo that if another be apt and prepared to do the like, he followeth by the ſight of another. So the laughing of another maketh to laugh.

*Experiment ſolitary touching infectious diſeaſes.*

297. THERE be ſome known diſeaſes that are infectious; and others that are not. Thoſe that are infectious are, firſt, ſuch as are chiefly in the ſpirits, and not ſo much in the humours; and therefore paſs eaſily from body to body: ſuch are peſtilences, lippitudes, and ſuch like. Secondly, ſuch as taint the breath, which we ſee paſſeth manifeſtly from man to man; and not inviſible, as the affects of the ſpirits do: ſuch are conſumptions of the lungs, *&c.* Thirdly, ſuch as come forth to the ſkin, and therefore taint the air on the body adjacent; eſpecially if they conſiſt in an unctuous ſubſtance not apt to diſſipate; ſuch are ſcabs and leproſy. Fourthly, ſuch as are merely in the humours, and not in the ſpirits, breath or exhalations: and therefore they never infect but by touch only; and ſuch a touch alſo as cometh within the *epidermis*; as the venom of the *French*-pox, and the biting of a mad dog.

*Experiment ſolitary touching the incorporation of powders and liquors.*

298. MOST powders grow more cloſe and coherent by mixture of water, than by mixture of oil, though oil be the thicker body; as meal, *&c.* The reaſon is the congruity of bodies; which if it be more, maketh a perfecter imbibition and incorporation; which in moſt powders is more between them and water, than between them and oil: but painters colours ground, and aſhes, do better incorporate with oil.

*Experiments ſolitary touching exerciſe of the body.*

299. MUCH motion and exerciſe is good for ſome bodies; and ſitting and leſs motion for others. If the body be hot and void of ſuperfluous moiſtures, too much motion hurteth: and it is an error in phyſicians, to call too much upon exerciſe. Likewiſe men ought to beware, that they uſe not exerciſe and a ſpare diet both: but if much exerciſe, then a plentiful diet; and if ſparing diet, then little exerciſe. The benefits that come of exerciſe are, firſt, that it ſendeth nouriſhment into the parts more forcibly. Secondly, that it helpeth to excern by ſweat, and ſo maketh the parts aſſimilate the more perfectly. Thirdly, that it maketh the ſubſtance of the body more ſolid and compact; and ſo leſs apt to be conſumed and depredated by the ſpirits. The evils that come of exerciſe are, firſt, that it maketh the ſpirits more hot and predatory. Secondly, that it doth abſorb likewiſe, and attenuate too much the moiſture of the body. Thirdly, that it maketh too great concuſſion (eſpecially if it be violent) of the inward parts, which delight more in reſt. But generally exerciſe, if it be much, is no friend to prolongation of life; which is one cauſe why women live longer than men, becauſe they ſtir leſs.

*Experiment ſolitary touching meats that induce ſatiety.*

300. SOME food we may uſe long, and much, without glutting; as bread, fleſh that is not fat or rank, *&c.* Some other (though pleaſant) glutteth ſooner; as ſweet meats, fat meats, *&c.* The cauſe is, for that appetite conſiſteth in the emptineſs of the mouth of the ſtomach; or poſſeſſing it with ſomewhat

what that is aſtringent; and therefore cold and dry. But things that are ſweet and fat are more filling; and do ſwim and hang more about the mouth of the ſtomach; and go not down ſo ſpeedily: and again turn ſooner to choler, which is hot, and ever abateth the appetite. We ſee alſo, that another cauſe of ſatiety, is an over-cuſtom; and of appetite is novelty; and therefore meats, if the ſame be continually taken, induce loathing. To give the reaſon of the diſtaſte of ſatiety, and of the pleaſure in novelty; and to diſtinguiſh not only in meats and drinks, but alſo in motions, loves, company, delights, ſtudies, what they be that cuſtom maketh more grateful, and what more tedious, were a large field. But for meats, the cauſe is attraction, which is quicker, and more excited towards that which is new, than towards that whereof there remaineth a reliſh by former uſe. And (generally) it is a rule, that whatſoever is ſomewhat ingrate at firſt, is made grateful by cuſtom; but whatſoever is too pleaſing at firſt, groweth quickly to ſatiate.

# NATURAL HISTORY.

## CENT. IV.

*Experiments in conſort touching the clarification of liquors, and the accelerating thereof.*

ACCELERATION of time, in works of nature, may well be eſteemed *inter magnalia naturae*. And even in divine miracles, accelerating of the time is next to the creating of the matter. We will now therefore proceed to the enquiry of it: and for acceleration of germination, we will refer it over unto the place where we ſhall handle the ſubject of plants generally; and will now begin with other accelerations.

301. LIQUORS are (many of them) at the firſt thick and troubled; as muſte, wort, juices of fruits, or herbs expreſſed, *&c.* and by time they ſettle and clarify. But to make them clear before the time, is a great work; for it is a ſpur to nature, and putteth her out of her pace: and beſides, it is of good uſe for making drinks and ſauces potable and ſerviceable ſpeedily; but to know the means of accelerating clarification, we muſt firſt know the cauſes of clarification. The firſt cauſe is, by the ſeparation of the groſſer parts of the liquor from the finer. The ſecond, by the equal diſtribution of the ſpirits of the liquor with the tangible parts: for that ever repreſenteth bodies clear and untroubled. The third, by the refining the ſpirit it ſelf, which thereby giveth to the liquor more ſplendor and more luſtre.

302. FIRST, for ſeparation, it is wrought by weight, as in the ordinary reſidence or ſettlement of liquors, by heat, by motion, by precipitation, or ſublimation; (that is, a calling of the ſeveral parts either up or down, which is a kind of attraction:) by adheſion; as when a body more viſcous is mingled and agitated with the liquor; which viſcous body (afterwards ſevered) draweth with it the groſſer parts of the liquor: and laſtly, by percolation or paſſage.

303. SECONDLY, for the even diſtribution of the ſpirits, it is wrought by gentle heat; and by agitation or motion; (for of time we ſpeak not, becauſe it is that we would anticipate and repreſent:) and it is wrought alſo by mixture of ſome other body, which hath a virtue to open the liquor, and to make the ſpirits the better paſs through.

304. THIRDLY, for the refining of the ſpirit, it is wrought likewiſe by heat; by motion; and by mixture of ſome body which hath virtue to attenuate. So therefore (having ſhewn the cauſes) for the accelerating of clarification in general, and the inducing of it, take theſe inſtances and trials.

305. It is in common practice to draw wine or beer from the lees, (which we call racking;) whereby it will clarify much the ſooner: for the lees, though they keep the drink in heart, and make it laſting; yet withal they caſt up ſome ſpiſſitude: and this inſtance is to be referred to ſeparation.

306. On the other ſide it were good to try, what the adding to the liquor more lees than his own will work; for though the lees do make the liquor turbid, yet they refine the ſpirits. Take therefore a veſſel of new beer, and take another veſſel of new beer, and rack the one veſſel from the lees, and pour the lees of the racked veſſel into the unracked veſſel, and ſee the effect: this inſtance is referred to the refining of the ſpirits.

307. Take new beer, and put in ſome quantity of ſtale beer into it, and ſee whether it will not accelerate the clarification, by opening the body of the beer, and cutting the groſſer parts, whereby they may fall down into lees. And this inſtance again is referred to ſeparation.

308. The longer malt or herbs, or the like, are infuſed in liquor, the more thick and troubled the liquor is; but the longer they be decocted in the liquor, the clearer it is. The reaſon is plain, becauſe in infuſion, the longer it is, the greater is the part of the groſs body that goeth into the liquor: but in decoction, though more goeth forth, yet it either purgeth at the top, or ſettleth at the bottom. And therefore the moſt exact way to clarify, is, firſt, to infuſe, and then to take off the liquor and decoct it; as they do in beer, which hath malt firſt infuſed in the liquor, and is afterwards boiled with the hop. This alſo is referred to ſeparation.

309. Take hot embers, and put them about a bottle filled with new beer, almoſt to the very neck; let the bottle be well ſtopped, leſt it fly out: and continue it, renewing the embers every day by the ſpace of ten days; and then compare it with another bottle of the ſame beer ſet by. Take alſo lime both quenched and unquenched, and ſet the bottles in them *ut ſupra*. This inſtance is referred both to the even diſtribution, and alſo to the refining of the ſpirits by heat.

310. Take bottles, and ſwing them; or carry them in a wheel-barrow upon rough ground, twice in a day: but then you may not fill the bottles full, but leave ſome air; for if the liquor come cloſe to the ſtopple, it cannot play nor flower: and when you have ſhaken them well either way, pour the drink into another bottle ſtopped cloſe after the uſual manner; for if it ſtay with much air in it, the drink will pall; neither will it ſettle ſo perfectly in all the parts. Let it ſtand ſome twenty four hours: then take it, and put it again into a bottle with air, *ut ſupra:* and thence into a bottle ſtopped, *ut ſupra:* and ſo repeat the ſame operation for ſeven days. Note, that in the emptying of one bottle into another, you muſt do it ſwiftly leſt the drink pall. It were good alſo to try it in a bottle with a little air below the neck, without emptying. This inſtance is referred to the even diſtribution and refining of the ſpirits by motion.

311. As for percolation inward and outward, (which belongeth to ſeparation) trial would be made of clarifying by adheſion, with milk put into new beer, and ſtirred with it: for it may be that the groſſer part of the beer will cleave to the milk: the doubt is, whether the milk will ſever well again; which is ſoon tried. And it is uſual in clarifying hippocraſs to put in milk; which after ſevereth and carrieth with it the groſſer parts of the hippocraſs, as hath been ſaid elſewhere. Alſo for the better clarification by percolation, when they tun new beer, they uſe to let it paſs through a ſtrainer; and it is like the finer the ſtrainer is, the clearer it will be.

*Experiments in conſort touching maturation, and the accelerating thereof. And firſt, touching the maturation and quickning of drinks. And next, touching maturation of fruits.*

THE accelerating of maturation we will now enquire of. And of maturation it ſelf. It is of three natures. The maturation of fruits: the maturation of drinks: and the maturation of impoſtumes and ulcers. This laſt we refer to another place, where we ſhall handle experiments medicinal. There be alſo other maturations, as of metals, *&c.* whereof we will ſpeak as occaſion ſerveth. But we will begin with that of drinks, becauſe it hath ſuch affinity with the clarification of liquors.

312. FOR the maturation of drinks, it is wrought by the congrégation of the ſpirits together, whereby they digeſt more perfectly the groſſer parts: and it is effected partly by the ſame means that clarification is, (whereof we ſpake before;) but then note, that an extreme clarification doth ſpread the ſpirits ſo ſmooth, as they become dull, and the drink dead, which ought to have a little flowering. And therefore all your clear amber drink is flat.

313. WE ſee the degrees of maturation of drinks; in muſte, in wine, as it is drunk, and in vinegar. Whereof muſte hath not the ſpirits well congregated; wine hath them well united; ſo as they make the parts ſomewhat more oily: vinegar hath them congregated, but more jejune, and in ſmaller quantity; the greateſt and fineſt ſpirit and part being exhaled: for we ſee vinegar is made by ſetting the veſſel of wine againſt the hot ſun; and therefore vinegar will not burn; for that much of the finer parts is exhaled.

314. THE refreſhing and quickning of drink palled or dead, is by enforcing the motion of the ſpirit: ſo we ſee that open weather relaxeth the ſpirit, and maketh it more lively in motion. We ſee alſo bottling of beer or ale, while it is new and full of ſpirit, (ſo that it ſpirteth when the ſtopple is taken forth) maketh the drink more quick and windy. A pan of coals in the cellar doth likewiſe good, and maketh the drink work again. New drink put to drink that is dead provoketh it to work again: nay, which is more, (as ſome affirm) a brewing of new beer ſet by old beer, maketh it work again. It were good alſo to enforce the ſpirits by ſome mixtures, that may excite and quicken them; as by putting into the bottles, nitre, chalk, lime, *&c.* We ſee cream is matured, and made to riſe more ſpeedily by putting in cold water; which as it ſeemeth getteth down the whey.

315. It is tried, that the burying of bottles of drink well ſtopped, either in dry earth a good depth; or in the bottom of a well within water; and beſt of all the hanging of them in a deep well ſomewhat above the water for ſome fortnights ſpace, is an excellent means of making drink freſh and quick: for the cold doth not cauſe any exhaling of the ſpirits at all, as heat doth, though it rarifieth the reſt that remain: but cold maketh the ſpirits vigorous, and irritateth them, whereby they incorporate the parts of the liquor perfectly.

316. As for the maturation of fruits; it is wrought by the calling forth of the ſpirits of the body outward, and ſo ſpreading them more ſmoothly: and likewiſe by digeſting in ſome degree the groſſer parts: and this is effected by heat, motion, attraction; and by a rudiment of putrefaction: for the inception of putrefaction hath in it a maturation.

317. THERE were taken apples, and laid in ſtraw; in hay; in flower; in chalk; in lime; covered over with onions; covered over with crabs; cloſed

up in wax; ſhut in a box, &c. There was alſo an apple hanged up in ſmoak; of all which the experiment ſorted in this manner.

318. AFTER a month's ſpace, the apple encloſed in wax, was as green and freſh as at the firſt putting in, and the kernels continued white. The cauſe is, for that all excluſion of open air, (which is ever predatory) maintaineth the body in his firſt freſhneſs and moiſture: but the inconvenience is, that it taſteth a little of the wax; which, I ſuppoſe, in a pomgranate, or ſome ſuch thick-coated fruit, it would not do.

319. THE apple hanged in the ſmoak, turned like an old mellow apple, wrinkled, dry, ſoft, ſweet, yellow within. The cauſe is, for that ſuch a degree of heat, which doth neither melt nor ſcorch, (for we ſee that in a greater heat, a roaſt apple ſoftneth and melteth; and pigs feet, made of quarters of wardens, ſcorch and have a ſkin of cole) doth mellow, and not adure: the ſmoak alſo maketh the apple (as it were) ſprinkled with ſoot, which helpeth to mature. We ſee that in drying of pears and prunes in the oven, and removing of them often as they begin to ſweat, there is a like operation; but that is with a far more intenſe degree of heat.

320. THE apples covered in the lime and aſhes were well matured; as appeared both in their yellowneſs and ſweetneſs. The cauſe is, for that that degree of heat which is in lime and aſhes, (being a ſmothering heat) is of all the reſt moſt proper, for it doth neither liquefy nor arefy; and that is true maturation. Note that the taſte of thoſe apples was good; and therefore it is the experiment fitted for uſe.

321. THE apples covered with crabs and onions, were likewiſe well matured. The cauſe is, not any heat; but for that the crabs and the onions draw forth the ſpirits of the apple, and ſpread them equally throughout the body; which taketh away hardneſs. So we ſee one apple ripeneth againſt another. And therefore in making of cyder, they turn the apples firſt upon a heap. So one cluſter of grapes that toucheth another whilſt it groweth, ripeneth faſter; *botrus contra botrum citius matureſcit.*

322. THE apples in hay and the ſtraw, ripened apparently, though not ſo much as the other; but the apple in the ſtraw more. The cauſe is, for that the hay and ſtraw have a very low degree of heat, but yet cloſe and ſmothering, and which drieth not.

323. THE apple in the cloſe box was ripened alſo: the cauſe is, for that all air kept cloſe hath a degree of warmth: as we ſee in wool, furr, pluſh, &c.

NOTE that all theſe were compared with another apple of the ſame kind, that lay of it ſelf: and in compariſon of that were more ſweet and more yellow, and ſo appeared to be more ripe.

324. TAKE an apple, or pear, or other like fruit, and roll it upon a table hard: we ſee in common experience, that the rolling doth ſoften and ſweeten the fruit preſently; which is nothing but the ſmooth diſtribution of the ſpirits into the parts: for the unequal diſtribution of the ſpirits maketh the harſhneſs: but this hard rolling is between concoction, and a ſimple maturation; therefore, if you ſhould roll them but gently, perhaps twice a day; and continue it ſome ſeven days, it is like they would mature more finely, and like unto the natural maturation.

325. TAKE an apple, and cut out a piece of the top, and cover it, to ſee whether that ſolution of continuity will not haſten a maturation: we ſee that where a waſp, or a fly, or a worm hath bitten, in a grape, or any fruit, it will ſweeten haſtily.

326. TAKE an apple, &c. and prick it with a pin full of holes, not deep, and

and ſmear it a little with ſack, or cinnamon water, or ſpirit of wine, every day for ten days, to ſee if the virtual heat of the wine or ſtrong waters will not mature it.

IN theſe trials alſo, as was uſed in the firſt, ſet another of the ſame fruits by to compare them; and try them by their yellowneſs and by their ſweetneſs.

*Experiment ſolitary touching the making of gold.*

THE world hath been much abuſed by the opinion of making of gold: the work it ſelf I judge to be poſſible; but the means (hitherto propounded) to effect it, are, in the practice, full of error and impoſture; and in the theory, full of unſound imaginations. For to ſay, that nature hath an intention to make all metals gold; and that, if ſhe were delivered from impediments, ſhe would perform her own work; and that, if the crudities, impurities, and leproſities of metals were cured, they would become gold; and that a little quantity of the medicine, in the work of projection, will turn a ſea of the baſer metal into gold by multiplying: all theſe are but dreams; and ſo are many other grounds of alchymy. And to help the matter, the alchymiſts call in likewiſe many vanities out of aſtrology; natural magick; ſuperſtitious interpretations of ſcriptures; auricular traditions; feigned teſtimonies of ancient authors; and the like. It is true, on the other ſide, they have brought to light not a few profitable experiments, and thereby made the world ſome amends. But we, when we ſhall come to handle the verſion and tranſmutation of bodies, and the experiments concerning metals and minerals; will lay open the true ways and paſſages of nature, which may lead to this great effect. And we commend the wit of the *Chineſes*, who deſpair of making of gold, but are mad upon the making of ſilver: for certain it is, that it is more difficult to make gold, (which is the moſt ponderous and materiate amongſt metals) of other metals leſs ponderous and leſs materiate; than (*via verſa*) to make ſilver of lead or quickſilver; both which are more ponderous than ſilver; ſo that they need rather a farther degree of fixation, than any condenſation. In the mean time, by occaſion of handling the axioms touching maturation, we will direct a trial touching the maturing of metals, and thereby turning ſome of them into gold: for we conceive indeed, that a perfect good concoction, or digeſtion, or maturation of ſome metals, will produce gold. And here we call to mind, that we knew a *Dutchman*, that had wrought himſelf into the belief of a great perſon, by undertaking that he could make gold: whoſe diſcourſe was, that gold might be made; but that the alchymiſts over-fired the work: for (he ſaid) the making of gold did require a very temperate heat, as being in nature a ſubterrany work, where little heat cometh; but yet more to the making of gold than of any other metal; and therefore that he would do it with a great lamp, that ſhould carry a temperate and equal heat: and that it was the work of many months. The device of the lamp was folly; but the over-firing now uſed, and the equal heat to be required, and the making it a work of ſome good time, are no ill diſcourſes.

WE reſort therefore to our axioms of maturation, in effect touched before. The firſt is, that there be uſed a temperate heat; for they are ever temperate heats that digeſt and mature: wherein we mean temperate, according to the nature of the ſubject; for that may be temperate to fruits and liquors, which will not work at all upon metals. The ſecond is, that the ſpirit of the metal be quickned, and the tangible parts opened: for without thoſe two

ope-

operations, the ſpirit of the metal wrought upon, will not be able to digeſt the parts. The third is, that the ſpirits do ſpread themſelves even, and move not ſubſultorily; for that will make the parts cloſe and pliant. And this requireth a heat that doth not riſe and fall, but continue as equal as may be. The fourth is, that no part of the ſpirit be emitted, but detained: for if there be emiſſion of ſpirit, the body of the metal will be hard and churliſh. And this will be performed, partly by the temper of the fire; and partly by the cloſeneſs of the veſſel. The fifth is, that there be choice made of the likelieſt and beſt prepared metal for the verſion: for that will facilitate the work. The ſixth is, that you give time enough for the work: not to prolong hopes (as the alchymiſts do;) but indeed to give nature a convenient ſpace to work in. Theſe principles are moſt certain and true; we will now derive a direction of trial out of them; which may (perhaps) by farther meditation be improved.

327. LET there be a ſmall furnace made of a temperate heat; let the heat be ſuch as may keep the metal perpetually molten, and no more; for that above all importeth to the work. For the material, take ſilver, which is the metal that in nature ſymbolizeth moſt with gold; put in alſo with the ſilver, a tenth part of quickſilver, and a twelfth part of nitre, by weight; both theſe to quicken and open the body of the metal: and ſo let the work be continued by the ſpace of ſix months at the leaſt. I wiſh alſo, that there be at ſome times, an injection of ſome oiled ſubſtance; ſuch as they uſe in the recovering of gold, which by vexing with ſeparations hath been made churliſh: and this is to lay the parts more cloſe and ſmooth, which is the main work. For gold (as we ſee) is the cloſeſt (and therefore the heavieſt) of metals; and is likewiſe the moſt flexible and tenſible. Note, that to think to make gold of quickſilver, becauſe it is the heavieſt, is a thing not to be hoped; for quickſilver will not endure the manage of the fire. Next to ſilver, I think copper were fitteſt to be the material.

*Experiment ſolitary touching the nature of gold.*

328. GOLD hath theſe natures; greatneſs of weight; cloſeneſs of parts; fixation; pliantneſs, or ſoftneſs; immunity from ruſt; colour or tincture of yellow. Therefore the ſure way (though moſt about) to make gold, is to know the cauſes of the ſeveral natures before rehearſed, and the axioms concerning the ſame. For if a man can make a metal that hath all theſe properties, let men diſpute whether it be gold or no?

*Experiments in conſort touching the inducing and accelerating of putrefaction.*

THE inducing and accelerating of putrefaction, is a ſubject of a very univerſal enquiry: for corruption is a reciprocal to generation: and they two are as nature's two terms or boundaries; and the guides to life and death. Putrefaction is the work of the ſpirits of bodies, which ever are unquiet to get forth and congregate with the air, and to enjoy the ſun-beams. The getting forth, or ſpreading of the ſpirits, (which is a degree of getting forth) hath five differing operations. If the ſpirits be detained within the body, and move more violently, there followeth colliquation, as in metals, *&c.* If more mildly, there followeth digeſtion, or maturation; as in drinks and fruits. If the ſpirits be not merely detained, but protrude a little, and that motion be confuſed and inordinate, there followeth putrefaction; which ever diſſolveth the conſiſtence of the body into much inequality; as in fleſh, rotten fruits, ſhining wood, *&c.* and alſo in the ruſt of metals. But if that motion be in

a certain order, there followeth vivification and figuration; as both in living creatures bred of putrefaction, and in living creatures perfect. But if the ſpirits iſſue out of the body, there followeth deficcation, induration, conſumption, *&c.* as in brick, evaporation of bodies liquid, *&c.*

329. THE means to induce and accelerate putrefaction, are, firſt, by adding ſome crude or watry moiſture; as in wetting of any fleſh, fruit, wood, with water, *&c.* for contrariwiſe unctuous and oily ſubſtances preſerve.

330. THE ſecond is by invitation or excitation; as when a rotten apple lieth cloſe to another apple that is ſound: or when dung (which is a ſubſtance already putrefied) is added to other bodies. And this is alſo notably ſeen in church-yards, where they bury much: where the earth will conſume the corps in far ſhorter time than other earth will.

331. THE third is by cloſeneſs and ſtopping, which detaineth the ſpirits in priſon more than they would; and thereby irritateth them to ſeek iſſue; as in corn and clothes which wax muſty; and therefore open air (which they call *aer perflabilis)* doth preſerve: and this doth appear more evidently in agues, which come (moſt of them) of obſtructions, and penning the humours, which thereupon putrefy.

332. THE fourth is by ſolution of continuity; as we ſee an apple will rot ſooner if it be cut or pierced; and ſo will wood, *&c.* And ſo the fleſh of creatures alive, where they have received any wound.

333. THE fifth is either by the exhaling or by the driving back of the principal ſpirits, which preſerve the conſiſtence of the body; ſo that when their government is diſſolved, every part returneth to his nature or homogeny. And this appeareth in urine and blood when they cool, and thereby break: it appeareth alſo in the gangrene, or mortification of fleſh, either by opiates, or by intenſe colds. I conceive alſo the ſame effect is in peſtilences; for that the malignity of the infecting vapour danceth the principal ſpirits, and maketh them fly and leave their regiment; and then the humours, fleſh, and ſecondary ſpirits, do diſſolve and break as in an anarchy.

334. THE ſixth is when a foreign ſpirit, ſtronger and more eager than the ſpirit of the body, entreth the body; as in the ſtinging of ſerpents. And this is the cauſe (generally) that upon all poiſons followeth ſwelling: and we ſee ſwelling followeth alſo, when the ſpirits of the body it ſelf congregate too much; as upon blows and bruiſes; or when they are pent in too much, as in ſwelling upon cold. And we ſee alſo, that the ſpirits coming of putrefaction of humours in agues, *&c.* which may be counted as foreign ſpirits, though they be bred within the body, do extinguiſh and ſuffocate the natural ſpirits and heat.

335. THE ſeventh is by ſuch a weak degree of heat, as ſetteth the ſpirits in a little motion, but is not able either to digeſt the parts, or to iſſue the ſpirits; as is ſeen in fleſh kept in a room that is not cool: whereas in a cool and wet larder it will keep longer. And we ſee that vivification (whereof putrefaction is the baſtard brother) is effected by ſuch ſoft heats; as the hatching of eggs, the heat of the womb, *&c.*

336. THE eighth is by the releaſing of the ſpirits, which before were cloſe kept by the ſolidneſs of their coverture, and thereby their appetite of iſſuing checked; as in the artificial ruſts induced by ſtrong waters, in iron, lead, *&c.* and therefore wetting haſteneth ruſt or putrefaction of any thing, becauſe it ſoftneth the cruſt for the ſpirits to come forth.

337. THE ninth is by the interchange of heat and cold, or wet and dry;

as

as we ſee in the mouldring of earth in froſts and ſun; and in the more haſty rotting of wood, that is ſometimes wet, ſometimes dry.

338. THE tenth is by time, and the work and procedure of the ſpirits themſelves, which cannot keep their ſtation; eſpecially if they be left to themſelves; and there be not agitation or local motion. As we ſee in corn not ſtirred; and mens bodies not exerciſed.

339. ALL moulds are inceptions of putrefaction; as the moulds of pies and fleſh; the moulds of oranges and lemons; which moulds afterwards turn into worms, or more odious putrefactions: and therefore (commonly) prove to be of ill odour. And if the body be liquid, and not apt to putrefy totally, it will caſt up a mother in the top, as the mothers of diſtilled waters.

340. Moss is a kind of mould of the earth and trees. But it may be better ſorted as a rudiment of germination; to which we refer it.

*Experiments in conſort touching prohibiting and preventing putrefaction.*

IT is an enquiry of excellent uſe, to enquire of the means of preventing or ſtaying of putrefaction; for therein conſiſteth the means of conſervation of bodies: for bodies have two kinds of diſſolutions; the one by conſumption and deſiccation; the other by putrefaction. But as for the putrefactions of the bodies of men and living creatures, (as in agues, worms, conſumptions of the lungs, impoſtumes, and ulcers both inwards and outwards) they are a great part of phyſick and ſurgery; and therefore we will reſerve the enquiry of them to the proper place, where we ſhall handle medicinal experiments of all ſorts. Of the reſt we will now enter into an enquiry: wherein much light may be taken, from that which hath been ſaid of the means to induce or accelerate putrefactions: for the removing that which cauſed putrefaction, doth prevent and avoid putrefaction.

341. THE firſt means of prohibiting or checking putrefaction, is cold: for ſo we ſee that meat and drink will laſt longer unputrefied, or unſowred, in winter than in ſummer: and we ſee that flowers and fruits, put in conſervatories of ſnow, keep freſh. And this worketh by the detention of the ſpirits, and conſtipation of the tangible parts.

342. THE ſecond is aſtriction: for aſtriction prohibiteth diſſolution: as we ſee (generally) in medicines, whereof ſuch as are aſtringents do inhibit putrefaction: and by the ſame reaſon of aſtringency, ſome ſmall quantity of oil of vitriol will keep freſh water long from putrefying. And this aſtriction is in a ſubſtance that hath a virtual cold; and it worketh (partly) by the ſame means that cold doth.

343. THE third is the excluding of the air; and again, the expoſing to the air: for theſe contraries (as it cometh often to paſs) work the ſame effect, according to the nature of the ſubject matter. So we ſee, that beer or wine, in bottles cloſe ſtopped, laſt long; that the garners under ground keep corn longer than thoſe above ground; and that fruit cloſed in wax keepeth freſh; and likewiſe bodies put in honey and flower, keep more freſh: and liquors, drinks and juices, with a little oil caſt on the top, keep freſh. Contrariwiſe, we ſee that cloth and apparel not aired, do breed moths and mould; and the diverſity is, that in bodies that need detention of ſpirits, the excluſion of the air doth good; as in drinks and corn: but in bodies that need emiſſion of ſpirits to diſcharge ſome of the ſuperfluous moiſture, it doth hurt, for they require airing.

344. THE fourth is motion and ſtirring; for putrefaction aſketh reſt: for the ſubtle motion which putrefaction requireth, is diſturbed by any agitation;

and all local motion keepeth bodies integral, and their parts together; as we ſee that turning over of corn in a garner, or letting it run like an hour-glaſs, from an upper room into a lower, doth keep it ſweet; and running waters putrefy not: and in mens bodies, exerciſe hindreth putrefaction; and contrariwiſe, reſt and want of motion, or ſtoppings (whereby the run of humours, or the motion of perſpiration is ſtayed) further putrefaction; as we partly touched a little before.

345. THE fifth is, the breathing forth of the adventitious moiſture in bodies; for as wetting doth haſten putrefaction; ſo convenient drying (whereby the more radical moiſture is only kept in) putteth back putrefaction: ſo we ſee that herbs and flowers, if they be dried in the ſhade, or dried in the hot ſun for a ſmall time, keep beſt. For the emiſſion of the looſe and adventitious moiſture, doth betray the radical moiſture; and carrieth it out for company.

346. THE ſixth is the ſtrengthening of the ſpirits of bodies; for as a great heat keepeth bodies from putrefaction, but a tepid heat inclineth them to putrefaction: ſo a ſtrong ſpirit likewiſe preſerveth, and a weak or faint ſpirit diſpoſeth to corruption. So we find that ſalt water corrupteth not ſo ſoon as freſh: and ſalting of oyſters, and powdring of meat, keepeth them from putrefaction. It would be tried alſo, whether chalk put into water or drink, doth not preſerve it from putrefying, or ſpeedy ſowering. So we ſee that ſtrong beer will laſt longer than ſmall; and all things that are hot and aromatical, do help to preſerve liquors, or powders, *&c.* which they do as well by ſtrengthening the ſpirits, as by ſoaking out the looſe moiſture.

347. THE ſeventh is ſeparation of the cruder parts, and thereby making the body more equal; for all imperfect mixture is apt to putrefy; and watry ſubſtances are more apt to putrefy than oily. So we ſee diſtilled waters will laſt longer than raw waters; and things that have paſſed the fire, do laſt longer than thoſe that have not paſſed the fire; as dried pears, *&c.*

348. THE eighth is the drawing forth continually of that part where the putrefaction beginneth: which is (commonly) the looſe and watry moiſture; not only for the reaſon before given, that it provoketh the radical moiſture to come forth with it; but becauſe being detained in the body, the putrefaction taking hold of it, infecteth the reſt: as we ſee in the embalming of dead bodies: and the ſame reaſon is of preſerving herbs, or fruits, or flowers, in bran or meal.

349. THE ninth is the commixture of any thing that is more oily or ſweet: for ſuch bodies are leaſt apt to putrefy, the air working little upon them; and they not putrefying, preſerve the reſt. And therefore we ſee ſyrups and ointments will laſt longer than juices.

350. THE tenth is the commixture of ſomewhat that is dry; for putrefaction beginneth firſt from the ſpirits; and then from the moiſture: and that that is dry is unapt to putrefy: and therefore ſmoak preſerveth fleſh; as we ſee in bacon and neats tongues, and Martlemas beef, *&c.*

351. The opinion of ſome of the ancients, that blown airs do preſerve bodies longer than other airs, ſeemeth to me probable; for that the blown airs being overcharged and compreſſed, will hardly receive the exhaling of any thing, but rather repulſe it. It was tried in a blown bladder, whereinto fleſh was put, and likewiſe a flower, and it ſorted not: for dry bladders will not blow; and new bladders rather further putrefaction: the way were therefore to blow ſtrongly with a pair of bellows into a hogſhead, putting into the

hogſhead (before) that which you would have preſerved; and in the inſtant that you withdraw the bellows, ſtop the hole cloſe.

*Experiment ſolitary touching wood ſhining in the dark.*

352. The experiment of wood that ſhineth in the dark, we have diligently driven and purſued: the rather, for that of all things that give light here below, it is the moſt durable, and hath leaſt apparent motion. Fire and flame are in continual expence; ſugar ſhineth only while it is in ſcraping; and ſalt-water while it is in daſhing; glow-worms have their ſhining while they live, or a little after; only ſcales of fiſhes (putrefied) ſeem to be of the ſame nature with ſhining wood: and it is true, that all putrefaction hath with it an inward motion, as well as fire or light. The trial ſorted thus: 1. The ſhining is in ſome pieces more bright, in ſome more dim; but the moſt bright of all doth not attain to the light of a glow-worm. 2. The woods that have been tried to ſhine, are chiefly ſallow and willow; alſo the aſh and hazle; it may be it holdeth in others. 3. Both roots and bodies do ſhine, but the roots better. 4. The colour of the ſhining part, by day-light, is in ſome pieces white, in ſome pieces inclining to red; which in the countrey they call the white and red garret. 5. The part that ſhineth, is (for the moſt part) ſomewhat ſoft, and moiſt to feel to; but ſome was found to be firm and hard; ſo as it might be figured into a croſs, or into beads, *&c.* But you muſt not look to have an image, or the like, in any thing that is lightſome; for even a face in iron red-hot will not be ſeen, the light confounding the ſmall differences of lightſome and darkſome, which ſhew the figure. 6. There was the ſhining part pared off, till you came to that that did not ſhine; but within two days the part contiguous began alſo to ſhine, being laid abroad in the dew; ſo as it ſeemeth the putrefaction ſpreadeth. 7. There was other dead wood of like kind, that was laid abroad, which ſhined not at the firſt; but after a night's lying abroad began to ſhine. 8. There was other wood that did firſt ſhine; and being laid dry in the houſe within five or ſix days, loſt the ſhining; and laid abroad again, recover'd the ſhining. 9. Shining woods being laid in a dry room, within a ſeven-night loſt their ſhining; but being laid in a cellar, or dark room, kept the ſhining. 10. The boring of holes in that kind of wood, and then laying it abroad, ſeemeth to conduce to make it ſhine: the cauſe is, for that all ſolution of continuity doth help on putrefaction, as was touched before. 11. No wood hath been yet tried to ſhine, that was cut down alive, but ſuch as was rotted both in ſtock and root while it grew. 12. Part of the wood that ſhined was ſteeped in oil, and retained the ſhining a fortnight. 13. The like ſucceeded in ſome ſteeped in water, and much better. 14. How long the ſhining will continue, if the wood be laid abroad every night, and taken in and ſprinkled with water in the day, is not yet tried. 15. Trial was made of laying it abroad in froſty weather, which hurt it not. 16. There was a great piece of a root which did ſhine, and the ſhining part was cut off till no more ſhined; yet after two nights, though it were kept in a dry room, it got a ſhining.

*Experiment ſolitary touching the acceleration of birth.*

353. The bringing forth of living creatures may be accelerated in two reſpects: the one, if the embryo ripeneth and perfecteth ſooner: the other, if there be ſome cauſe from the mother's body, of expulſion or putting it down: whereof the former is good, and argueth ſtrength; the latter is ill, and cometh by accident or diſeaſe. And therefore the ancient obſervation is

true, that the child born in the ſeventh month doth commonly well; but born in the eighth month, doth (for the moſt part) die. But the cauſe aſſigned is fabulous; which is, that in the eighth month ſhould be the return of the reign of the planet *Saturn:* which (as they ſay) is a planet malign; whereas in the ſeventh is the reign of the moon, which is a planet propitious. But the true cauſe is, for that where there is ſo great a prevention of the ordinary time, it is the luſtineſs of the child; but when it is leſs, it is ſome indiſpoſition of the mother.

*Experiment ſolitary touching the acceleration of growth and ſtature.*

354. To accelerate growth or ſtature, it muſt proceed either from the plenty of the nouriſhment; or from the nature of the nouriſhment; or from the quickning and exciting of the natural heat. For the firſt, exceſs of nouriſhment is hurtful; for it maketh the child corpulent; and growing in breadth rather than in height. And you may take an experiment from plants, which, if they ſpread much, are ſeldom tall. As for the nature of the nouriſhment; firſt, it may not be too dry; and therefore children in dairy countries do wax more tall, than where they feed more upon bread and fleſh. There is alſo a received tale; that boiling of daiſy roots in milk, (which it is certain are great driers) will make dogs little. But ſo much is true, that an over-dry nouriſhment in childhood putteth back ſtature. Secondly, the nouriſhment muſt be of an opening nature; for that attenuateth the juice, and furthereth the motion of the ſpirits upwards. Neither is it without cauſe, that *Xenophon*, in the nurture of the *Perſian* children, doth ſo much commend their feeding upon cardamon; which (he ſaith) made them grow better, and be of a more active habit. Cardamon is in latin *naſturtium*; and with us water-creſſes; which, it is certain, is an herb, that whilſt it is young, is friendly to life. As for the quickening of natural heat, it muſt be done chiefly with exerciſe; and therefore (no doubt) much going to ſchool, where they ſit ſo much, hindreth the growth of children; whereas countrey-people that go not to ſchool, are commonly of better ſtature. And again men muſt beware how they give children any thing that is cold in operation; for even long ſucking doth hinder both wit and ſtature. This hath been tried, that a whelp that hath been fed with nitre in milk, hath become very little, but extreme lively: for the ſpirit of nitre is cold. And though it be an excellent medicine in ſtrength of years for prolongation of life; yet it is in children and young creatures an enemy to growth: and all for the ſame reaſon; for heat is requiſite to growth; but after a man is come to his middle age, heat conſumeth the ſpirits; which the coldneſs of the ſpirit of nitre doth help to condenſe and correct.

*Experiments in conſort touching ſulphur and mercury, two of* Paracelſus's *principles.*

THERE be two great families of things; you may term them by ſeveral names; ſulphureous and mercurial, which are the chymiſts words: (for as for their *ſal*, which is their third principle, it is a compound of the other two;) inflammable and not inflammable; mature and crude; oily and watry. For we ſee that in ſubterranies there are, as the fathers of their tribes, brimſtone and mercury: in vegetables and living creatures there is water and oil: in the inferiour order of pneumaticals there is air and flame; and in the ſuperiour, there is the body of the ſtar and the pure ſky. And theſe pairs, though they be unlike in the primitive differences of matter, yet they ſeem to have

many conſents: for mercury and ſulphur are principal materials of metals; water and oil are principal materials of vegetables and animals; and ſeem to differ but in maturation or concoction: flame (in vulgar opinion) is but air incenſed; and they both have quickneſs of motion, and facility of ceſſion, much alike: and the interſtellar ſky (though the opinion be vain, that the ſtar is the denſer part of his orb) hath notwithſtanding ſo much affinity with the ſtar, that there is a rotation of that, as well as of the ſtar. Therefore it is one of the greateſt *magnalia naturae*, to turn water or watry juice into oil or oily juice: greater in nature, than to turn ſilver or quickſilver into gold.

355. THE inſtances we have wherein crude and watry ſubſtance turneth into fat and oily, are of four kinds. Firſt in the mixture of earth and water; which mingled by the help of the ſun, gather a nitrous fatneſs, more than either of them have ſeverally; as we ſee in that they put forth plants which need both juices.

356. THE ſecond is in the aſſimilation of nouriſhment, made in the bodies of plants and living creatures; whereof plants turn the juice of mere water and earth, into a great deal of oily matter: living creatures, though much of their fat and fleſh are out of oily aliments, (as meat and bread) yet they aſſimilate alſo in a meaſure their drink of water, &c. But theſe two ways of verſion of water into oil, namely, (by mixture and by aſſimilation) are by many paſſages and percolations, and by long continuance of ſoft heats, and by circuits of time.

357. THE third is in the inception of putrefaction; as in water corrupted; and the mothers of waters diſtilled; both which have a kind of fatneſs, or oil.

358. THE fourth is in the dulcoration of ſome metals; as *ſaccharum Saturni*, &c.

359. THE intenſion of verſion of water into a more oily ſubſtance, is by digeſtion; for oil is almoſt nothing elſe but water digeſted; and this digeſtion is principally by heat; which heat muſt be either outward or inward: again, it may be by provocation or excitation; which is cauſed by the mingling of bodies already oily or digeſted; for they will ſomewhat communicate their nature with the reſt. Digeſtion alſo is ſtrongly effected by direct aſſimilation of bodies crude into bodies digeſted; as in plants and living creatures, whoſe nouriſhment is far more crude than their bodies: but this digeſtion is by a great compaſs, as hath been ſaid. As for the more full handling of theſe two principles, whereof this is but a taſte; (the enquiry of which is one of the profoundeſt enquiries of nature) we leave it to the title of verſion of bodies; and likewiſe to the title of the firſt congregations of matter; which, like a general aſſembly of eſtates, doth give law to all bodies.

*Experiment ſolitary touching chameleons.*

360. A chameleon is a creature about the bigneſs of an ordinary lizard: his head unproportionably big; his eyes great: he moveth his head without the writhing of his neck, (which is inflexible) as a hog doth: his back crooked; his ſkin ſpotted with little tumours, leſs eminent nearer the belly; his tail ſlender and long: on each foot he hath five fingers; three on the outſide, and two on the inſide; his tongue of a marvellous length in reſpect of his body, and hollow at the end; which he will launch out to prey upon flies. Of colour green, and of a duſky yellow, brighter and whiter towards the belly; yet ſpotted with blue, white, and red. If he be laid upon green, the

green predominateth; if upon yellow, the yellow; not ſo if he be laid upon blue, or red, or white; only the green ſpots receive a more orient luſtre; laid upon black, he looketh all black, though not without a mixture of green. He feedeth not only upon air, (though that be his principal ſuſtenance) for ſometimes he taketh flies, as was ſaid; yet ſome that have kept chameleons a whole year together, could never perceive that ever they fed upon any thing elſe but air; and might obſerve their bellies to ſwell after they had exhauſted the air, and cloſed their jaws; which they open commonly againſt the rays of the ſun. They have a fooliſh tradition in magick, that if a chameleon be burnt upon the top of an houſe, it will raiſe a tempeſt; ſuppoſing (according to their vain dreams of ſympathies) becauſe he nouriſheth with air, his body ſhould have great virtue to make impreſſion upon the air.

*Experiments ſolitary touching ſubterrany fires.*

361. IT is reported by one of the ancients, that in part of *Media*, there are eruptions of flames out of plains; and that thoſe flames are clear, and caſt not forth ſuch ſmoak, and aſhes, and pumice, as mountain flames do. The reaſon (no doubt) is, becauſe the flame is not pent as it is in mountains and earthquakes which caſt flame. There be alſo ſome blind fires under ſtone, which flame not out, but oil being poured upon them they flame out. The cauſe whereof is, for that it ſeemeth the fire is ſo choaked, as not able to remove the ſtone, it is heat rather than flame; which nevertheleſs is ſufficient to inflame the oil.

*Experiment ſolitary touching nitre.*

362. IT is reported, that in ſome lakes the water is ſo nitrous, as if foul clothes be put into it, it ſcoureth them of it ſelf: and if they ſtay any whit long, they moulder away. And the ſcouring virtue of nitre is the more to be noted, becauſe it is a body cold; and we ſee warm water ſcoureth better than cold. But the cauſe is, for that it hath a ſubtle ſpirit, which ſevereth and divideth any thing that is foul and viſcous, and ſticketh upon a body.

*Experiment ſolitary touching congealing of air.*

363. TAKE a bladder, the greateſt you can get; fill it full of wind, and tie it about the neck with a ſilk thread waxed; and upon that likewiſe wax very cloſe; ſo that when the neck of the bladder drieth, no air may poſſibly get in nor out. Then bury it three or four foot under the earth in a vault, or in a conſervatory of ſnow, the ſnow being made hollow about the bladder; and after ſome fortnight's diſtance, ſee whether the bladder be ſhrunk; for if it be, then it is plain that the coldneſs of the earth or ſnow hath condenſed the air, and brought it a degree nearer to water: which is an experiment of great conſequence.

*Experiment ſolitary touching congealing of water into cryſtal.*

364. IT is a report of ſome good credit, that in deep caves there are penſile cryſtal, and degrees of cryſtal that drop from above; and in ſome other, (though more rarely) that riſe from below: Which though it be chiefly the work of cold, yet it may be that water that paſſeth through the earth, gathereth a nature more clammy, and fitter to congeal, and becomes ſolid, than water of it ſelf. Therefore trial would be made, to lay a heap of earth in great froſts, upon a hollow veſſel, putting a canvaſs between, that it falleth not in: and pour water upon it, in ſuch quantity as will be ſure to ſoak through;

through; and ſee whether it will not make an harder ice in the bottom of the veſſel, and leſs apt to diſſolve than ordinarily. I ſuppoſe alſo, that if you make the earth narrower at the bottom than at the top, in faſhion of a ſugar-loaf reverſed, it will help the experiment. For it will make the ice where it iſſueth leſs in bulk; and evermore ſmallneſs of quantity is a help to verſion.

*Experiment ſolitary touching preſerving of roſe-leaves both in colour and ſmell.*

365. Take damaſk roſes, and pull them; then dry them upon the top of an houſe, upon a lead or terras, in the hot ſun, in a clear day, between the hours only (only) of twelve and two, or thereabouts. Then put them into a ſweet dry earthen bottle, or a glaſs with narrow mouths, ſtuffing them cloſe together, but without bruiſing: ſtop the bottle or glaſs cloſe, and theſe roſes will retain not only their ſmell perfect, but their colour freſh for a year at leaſt. Note, that nothing doth ſo much deſtroy any plant, or other body, either by putrefaction or arefaction, as the adventitious moiſture which hangeth looſe in the body, if it be not drawn out. For it betrayeth and tolleth forth the innate and radical moiſture along with it when it ſelf goeth forth. And therefore in living creatures, moderate ſweat doth preſerve the juice of the body. Note, that theſe roſes, when you take them from the drying, have little or no ſmell; ſo that the ſmell is a ſecond ſmell, that iſſueth out of the flower afterwards.

*Experiments in conſort touching the continuance of flame.*

366. The continuation of flame, according unto the diverſity of the body inflamed, and other circumſtances, is worthy the enquiry; chiefly, for that though flame be (almoſt) of a momentary laſting, yet it receiveth the more, and the leſs: we will firſt therefore ſpeak (at large) of bodies inflamed wholly and immediately, without any wiek to help the inflammation. A ſpoonful of ſpirit of wine a little heated, was taken, and it burnt as long as came to a hundred and ſixteen pulſes. The ſame quantity of ſpirit of wine, mixed with the ſixth part of a ſpoonful of nitre, burnt but to the ſpace of ninety four pulſes. Mixed with the like quantity of bay-ſalt, eighty three pulſes. Mixed with the like quantity of gunpowder, which diſſolved into a black water, one hundred and ten pulſes. A cube or pellet of yellow wax was taken, as much as half the ſpirit of wine, and ſet in the midſt, and it burnt only to the ſpace of eighty ſeven pulſes. Mixed with the ſixth part of a ſpoonful of milk, it burnt to the ſpace of one hundred pulſes; and the milk was curdled. Mixed with the ſixth part of a ſpoonful of water, it burnt to the ſpace of eighty ſix pulſes; with an equal quantity of water, only to the ſpace of four pulſes. A ſmall pebble was laid in the midſt, and the ſpirit of wine burnt to the ſpace of ninety four pulſes. A piece of wood of the bigneſs of an arrow, and about a finger's length, was ſet up in the midſt, and the ſpirit of wine burnt to the ſpace of ninety four pulſes. So that the ſpirit of wine ſimple endured the longeſt; and the ſpirit of wine with the bay-ſalt, and the equal quantity of water, were the ſhorteſt.

367. Conſider well, whether the more ſpeedy going forth of the flame, be cauſed by the greater vigour of the flame in burning; or by the reſiſtance of the body mixed, and the averſion thereof to take flame: which will appear by the quantity of the ſpirit of wine, that remaineth after the going out of the flame. And it ſeemeth clearly to be the latter; for that the mixture of things leaſt apt to burn, is the ſpeedieſt in going out. And note, by the way, that ſpirit of wine burned, till it go out of it ſelf, will burn no more; and

and taſteth nothing ſo hot in the mouth as it did; no, nor yet ſour, (as if it were a degree towards vinegar) which burnt wine doth; but flat and dead.

368. NOTE, that in the experiment of wax aforeſaid, the wax diſſolved in the burning, and yet did not incorporate it ſelf with the ſpirit of wine, to produce one flame; but whereſover the wax floated, the flame forſook it, till at laſt it ſpread all over, and put the flame quite out.

369. THE experiments of the mixtures of the ſpirit of wine inflamed, are things of diſcovery, and not of uſe: but now we will ſpeak of the continuance of flames, ſuch as are uſed for candles, lamps or tapers; conſiſting of inflammable matters, and of a wiek that provoketh inflammation. And this importeth not only diſcovery, but alſo uſe and profit; for it is a great ſaving in all ſuch lights, if they can be made as fair and right as others, and yet laſt longer. Wax pure made into a candle, and wax mixed ſeverally into candle-ſtuff, with the particulars that follow; (*viz.* water, *aqua vitae*, milk, bay-ſalt, oil, butter, nitre, brimſtone, ſaw-duſt) every of theſe bearing a ſixth part to the wax; and every of theſe candles mixed, being of the ſame weight and wiek with the wax pure, proved thus in the burning and laſting. The ſwifteſt in conſuming was that with ſaw-duſt; which firſt burned fair till ſome part of the candle was conſumed, and the duſt gathered about the ſnaſt; but then it made the ſnaſt big and long, and to burn duſkiſhly, and the candle waſted in half the time of the wax pure. The next in ſwiftneſs were the oil and butter, which conſumed by a fifth part ſwifter than the pure wax. Then followed in ſwiftneſs the clear wax it ſelf. Then the bay-ſalt, which laſted about an eighth part longer than the clear wax. Then followed the *aqua vitae*, which laſted about a fifth part longer than the clear wax. Then followed the milk and water, with little difference from the *aqua vitae*, but the water ſloweſt. And in theſe four laſt, the wiek would ſpit forth little ſparks. For the nitre, it would not hold lighted above ſome twelve pulſes: but all the while it would ſpit out portions of flame, which afterwards would go out into a vapour. For the brimſtone, it would hold lighted much about the ſame with the nitre; but then after a little while it would harden and cake about the ſnaſt; ſo that the mixture of bay-ſalt with wax, will win an eighth part of the time of laſting, and the water a fifth.

370. AFTER the ſeveral materials were tried, trial was likewiſe made of ſeveral wieks; as of ordinary cotton, ſowing thread, ruſh, ſilk, ſtraw, and wood. The ſilk, ſtraw, and wood, would flame a little, till they came to the wax, and then go out: of the other three, the thread conſumed faſter than the cotton, by a ſixth part of time: the cotton next: then the ruſh conſumed ſlower than the cotton, by at leaſt a third part of time. For the bigneſs of the flame, the cotton and thread caſt a flame much alike; and the ruſh much leſs and dimmer. *Quaere*, Whether wood and wieks both, as in torches, conſume faſter than the wieks ſimple?

371. WE have ſpoken of the ſeveral materials, and the ſeveral wieks: but to the laſting of the flame it importeth alſo; not only what the material is, but in the ſame material, whether it be hard, ſoft, old, new, *&c.* Good houſewives, to make their candles burn the longer, uſe to lay them (one by one) in bran or flower, which make them harder, and ſo they conſume the ſlower: in ſo much as by this means they will outlaſt other candles of the ſame ſtuff almoſt half in half. For bran and flower have a virtue to harden; ſo that both age, and lying in the bran, doth help to the laſting. And we ſee that wax candles laſt longer than tallow candles, becauſe wax is more firm and hard.

372. THE

372. THE lasting of flame also dependeth upon the easy drawing of the nourishment; as we see in the court of *England*, there is a service which they call all-night; which is (as it were) a great cake of wax, with the wick in the midst; whereby it cometh to pass, that the wick fetcheth the nourishment farther off. We see also that lamps last longer, because the vessel is far broader than the breadth of a taper or candle.

373. TAKE a turreted lamp of tin, made in the form of a square; the height of the turret being thrice as much as the length of the lower part, whereupon the lamp standeth: make only one hole in it, at the end of the return farthest from the turret. Reverse it, and fill it full of oil by that hole; and then set it upright again; and put a wick in at the hole; and lighten it: you shall find that it will burn slow, and a long time: Which is caused, (as was said last before) for that the flame fetcheth the nourishment afar off. You shall find also, that as the oil wasteth and descendeth, so the top of the turret by little and little filleth with air; which is caused by the rarefaction of the oil by the heat. It were worthy the observation, to make a hole in the top of the turret, and to try when the oil is almost consumed, whether the air made of the oil, if you put to it a flame of a candle, in the letting of it forth, will enflame. It were good also to have the lamp made, not of tin, but of glass, that you may see how the vapour, or air gathereth, by degrees, in the top.

374. A fourth point that importeth the lasting of the flame, is the closeness of the air wherein the flame burneth. We see, that if wind bloweth upon a candle, it wasteth apace. We see also, it lasteth longer in a lanthorn than at large. And there are traditions of lamps and candles, that have burnt a very long time in caves and tombs.

375. A fifth point that importeth the lasting of the flame, is the nature of the air where the flame burneth; whether it be hot or cold, moist or dry. The air, if it be very cold, irritateth the flame, and maketh it burn more fiercely; (as fire scorcheth in frosty weather) and so furthereth the consumption. The air once heated (I conceive) maketh the flame burn more mildly, and so helpeth the continuance. The air, if it be dry, is indifferent: the air, if it be moist, doth in a degree quench the flame, (as we see lights will go out in the damps of mines:) and howsoever maketh it burn more dully, and so helpeth the continuance.

*Experiments in consort touching burials or infusions of divers bodies in earth.*

376. BURIALS in earth serve for preservation; and for condensation; and for induration of bodies. And if you intend condensation or induration, you may bury the bodies so as earth may touch them: as if you would make artificial porcellane, *&c.* And the like you may do for conservation, if the bodies be hard and solid; as clay, wood, *&c.* But if you intend preservation of bodies, more soft and tender, then you must do one of these two: either you must put them in cases, whereby they may not touch the earth; or else you must vault the earth, whereby it may hang over them, and not touch them: for if the earth touch them, it will do more hurt by the moisture, causing them to putrefy, than good by the virtual cold, to conserve them; except the earth be very dry and sandy.

377. AN orange, lemon and apple, wrapt in a linen cloth, being buried for a fortnight's space four foot deep within the earth, though it were in a moist place, and a rainy time, yet came forth no ways mouldy or rotten, but were become a little harder than they were; otherwise fresh in their colour; but

their

their juice ſomewhat flatted. But with the burial of a fortnight more they became putrefied.

378. A bottle of beer, buried in like manner as before, became more lively, better taſted, and clearer than it was. And a bottle of wine in like manner. A bottle of vinegar ſo buried, came forth more lively and more odoriferous, ſmelling almoſt like a violet. And after the whole month's burial, all the three came forth as freſh and lively, if not better than before.

379. IT were a profitable experiment, to preſerve oranges, lemons, and pomgranates, till ſummer; for then their price will be mightily increaſed. This may be done, if you put them in a pot or veſſel well covered, that the moiſture of the earth come not at them; or elſe by putting them in a conſervatory of ſnow. And generally, whoſoever will make experiments of cold, let him be provided of three things; a conſervatory of ſnow; a good large vault, twenty foot at leaſt under the ground; and a deep well.

380. THERE hath been a tradition, that pearl, and coral, and turchois-ſtone, that have loſt their colours, may be recovered by burying in the earth: which is a thing of great profit, if it would ſort: but upon trial of ſix weeks burial, there followed no effect. It were good to try it in a deep well, or in a conſervatory of ſnow, where the cold may be more conſtringent; and ſo make the body more united, and thereby more reſplendent.

*Experiment ſolitary touching the effects in mens bodies from ſeveral winds.*

381. MENS bodies are heavier, and leſs diſpoſed to motion, when ſouthern winds blow, than when northern. The cauſe is, for that when the ſouthern winds blow, the humours do (in ſome degree) melt and wax fluid, and ſo flow into the parts; as it is ſeen in wood and other bodies; which, when the ſouthern winds blow, do ſwell. Beſides, the motion and activity of the body conſiſteth chiefly in the ſinews, which, when the ſouthern wind bloweth, are more relax.

*Experiment ſolitary touching winter and ſummer ſickneſſes.*

382. IT is commonly ſeen, that more are ſick in the ſummer, and more die in the winter; except it be in peſtilent diſeaſes, which commonly reign in ſummer or autumn. The reaſon is, becauſe diſeaſes are bred (indeed) chiefly by heat; but then they are cured moſt by ſweat and purge; which in the ſummer cometh on, or is provoked more eaſily. As for peſtilent diſeaſes, the reaſon why moſt die of them in ſummer, is becauſe they are bred moſt in the ſummer; for otherwiſe thoſe that are touched are in moſt danger in the winter.

*Experiment ſolitary touching peſtilential ſeaſons.*

383. THE general opinion is, that years hot and moiſt are moſt peſtilent; upon the ſuperficial ground, that heat and moiſture cauſe putrefaction. In *England* it is found not true; for many times there have been great plagues in dry years. Whereof the cauſe may be, for that drought in the bodies of iſlanders habituate to moiſt airs, doth exaſperate the humours, and maketh them more apt to putrefy or inflame: beſides, it tainteth the waters, (commonly) and maketh them leſs wholeſome. And again in *Barbary*, the plagues break up in the ſummer months, when the weather is hot and dry.

*Experiment ſolitary touching an error received about epidemical diſeaſes.*

384. MANY diſeaſes (both epidemical and others) break forth at particular

times. And the cauſe is falſly imputed to the conſtitution of the air at that time, when they break forth or reign; whereas it proceedeth (indeed) from a precedent ſequence, and ſeries of the ſeaſons of the year: and therefore *Hippocrates* in his prognoſticks doth make good obſervations of the diſeaſes that enſue upon the nature of the precedent four ſeaſons of the year.

*Experiment ſolitary touching the alteration or preſervation of liquors in wells or deep vaults.*

385. TRIAL hath been made with earthern bottles well ſtopped, hanged in a well of twenty fathom deep at the leaſt; and ſome of the bottles have been let down into the water, ſome others have hanged above, within about a fathom of the water; and the liquors ſo tried, have been beer (not new, but ready for drinking) and wine and milk. The proof hath been, that both the beer and the wine (as well within water as above) have not been palled or deaded at all; but as good, or ſomewhat better, than bottles of the ſame drinks and ſtaleneſs kept in a cellar. But thoſe which did hang above water were apparently the beſt; and that beer did flower a little; whereas that under water did not, though it were freſh. The milk ſowred and began to putrefy. Nevertheleſs it is true, that there is a village near *Blois*, where in deep caves they do thicken milk; in ſuch ſort that it becometh very pleaſant; which was ſome cauſe of this trial of hanging milk in the well: but our proof was naught; neither do I know, whether that milk in thoſe caves be firſt boiled. It were good therefore to try it with milk ſodden, and with cream; for that milk of it ſelf is ſuch a compound body of cream, curds and whey, as it is eaſily turned and diſſolved. It were good alſo to try the beer when it is in wort, that it may be ſeen, whether the hanging in the well will accelerate the ripening and clarifying of it.

*Experiment ſolitary touching ſtutting.*

386. DIVERS, we ſee, do ſtut. The cauſe may be (in moſt) the refrigeration of the tongue; whereby it is leſs apt to move. And therefore we ſee that naturals do generally ſtut: and we ſee that in thoſe that ſtut, if they drink wine moderately, they ſtut leſs, becauſe it heateth: and ſo we ſee, that they that ſtut, do ſtut more in the firſt offer to ſpeak, than in continuance; becauſe the tongue is by motion ſomewhat heated. In ſome alſo, it may be (though rarely) the dryneſs of the tongue; which likewiſe maketh it leſs apt to move as well as cold: for it is an effect that it cometh to ſome wiſe and great men; as it did unto *Moſes*, who was *linguae praepeditae*; and many ſtutters (we find) are very cholerick men; choler inducing a dryneſs in the tongue.

*Experiments in conſort touching ſmells.*

387. SMELLS and other odours are ſweeter in the air at ſome diſtance, than near the noſe; as hath been partly touched heretofore. The cauſe is double: firſt, the finer mixture, or incorporation of the ſmell: for we ſee that in ſounds likewiſe, they are ſweeteſt, when we cannot hear every part by it ſelf. The other reaſon is, for that all ſweet ſmells have joined with them ſome earthy or crude odours; and at ſome diſtance the ſweet, which is the more ſpiritual, is perceived; and the earthy reacheth not ſo far.

388. SWEET ſmells are moſt forcible in dry ſubſtances when they are broken; and ſo likewiſe in oranges and lemons, the nipping of their rind, giveth out their ſmell more: and generally when bodies are moved or ſtirred, though

though not broken, they ſmell more; as a ſweet bag waved. The cauſe is double: the one, for that there is a greater emiſſion of the ſpirit when way is made: and this holdeth in the breaking, nipping or cruſhing; it holdeth alſo (in ſome degree) in the moving: but in this laſt there is a concurrence of the ſecond cauſe; which is the impulſion of the air that bringeth the ſcent faſter upon us.

389. THE daintieſt ſmells of flowers are out of thoſe plants whoſe leaves ſmell not; as violets, roſes, wall-flowers, gilly-flowers, pinks, wood-bines, vine-flowers, apple-blooms, lime-tree blooms, bean-blooms, *&c.* The cauſe is, for that where there is heat and ſtrength enough in the plant to make the leaves odorate, there the ſmell of the flower is rather evanid and weaker, than that of the leaves; as it is in roſemary flowers, lavender flowers, and ſweet briar roſes. But where there is leſs heat, there the ſpirit of the plant is digeſted and refined, and ſevered from the groſſer juice in the efflorescence, and not before.

390. MOST odours ſmell beſt broken or cruſh'd, as hath been ſaid; but flowers preſſed or beaten do loſe the freſhneſs and ſweetneſs of their odour. The cauſe is, for that when they are cruſhed, the groſſer and more earthy ſpirit cometh out with the finer, and troubleth it; whereas in ſtronger odours there are no ſuch degrees of the iſſue of the ſmell.

*Experiments in conſort touching the goodneſs and choice of water.*

391. IT is a thing of very good uſe to diſcover the goodneſs of waters. The taſte, to thoſe that drink water only, doth ſomewhat: but other experiments are more ſure. Firſt, try waters by weight; wherein you may find ſome difference, though not much: and the lighter you may account the better.

392. SECONDLY, try them by boiling upon an equal fire: and that which conſumeth away faſteſt, you may account the beſt.

393. THIRDLY, try them in ſeveral bottles, or open veſſels, matches in every thing elſe, and ſee which of them laſt longeſt without ſtench or corruption. And that which holdeth unputrefied longeſt, you may likewiſe account the beſt.

394. FOURTHLY, try them by making drinks ſtronger or ſmaller, with the ſame quantity of malt; and you may conclude, that that water which maketh the ſtronger drink, is the more concocted and nouriſhing; though perhaps it be not ſo good for medicinal uſe. And ſuch water (commonly) is the water of large and navigable rivers; and likewiſe in large and clean ponds of ſtanding water: for upon both of them, the ſun hath more power than upon fountains or ſmall rivers. And I conceive that chalk-water is next them the beſt, for going fartheſt in drink: for that alſo helpeth concoction; ſo it be out of a deep well; for then it cureth the rawneſs of the water; but chalky water, towards the top of the earth, is too fretting; as it appeareth in laundry of clothes, which wear out apace if you uſe ſuch waters.

395. FIFTHLY, the houſewives do find a difference in waters, for the bearing or not bearing of ſoap: and it is likely that the more fat water will bear ſoap beſt; for the hungry water doth kill the unctuous nature of the ſoap.

396. SIXTHLY, you may make a judgment of waters, according to the place whence they ſpring or come: the rain water is, by the phyſicians, eſteemed the fineſt and the beſt; but yet it is ſaid to putrefy ſooneſt; which is likely, becauſe of the fineneſs of the ſpirit: and in conſervatories of rain-

water, (ſuch as they have in *Venice*, &c.) they are found not ſo choice waters; the worſe (perhaps) becauſe they are covered aloft, and kept from the ſun. Snow-water is held unwholſome; in ſo much as the people that dwell at the foot of the ſnow mountains, or otherwiſe upon the aſcent, (eſpecially the women) by drinking of ſnow-water, have great bags hanging under their throats. Well-water, except it be upon chalk, or a very plentiful ſpring, maketh meat red; which is an ill ſign. Springs on the tops of high hills are the beſt: for both they ſeem to have a lightneſs and appetite of mounting; and beſides, they are moſt pure and unmingled; and again, are more percolated through a great ſpace of earth. For waters in valleys, join in effect under ground with all waters of the ſame level; whereas ſprings on the tops of hills, paſs through a great deal of pure earth, with leſs mixture of other waters.

397. Seventhly, judgment may be made of waters by the ſoil whereupon the water runneth; as pebble is the cleaneſt and beſt taſted; and next to that, clay-water; and thirdly, water upon chalk; fourthly, that upon ſand; and worſt of all upon mud. Neither may you truſt waters that taſte ſweet; for they are commonly found in riſing grounds of great cities; which muſt needs take in a great deal of filth.

*Experiment ſolitary touching the temperate heat under the aequinoctial.*

398. In *Peru*, and divers parts of the *Weſt-Indies*, though under the line, the heats are not ſo intolerable as they be in *Barbary*, and the ſkirts of the torrid zone. The cauſes are, firſt the great breezes which the motion of the air in great circles, (ſuch as are under the girdle of the world) produceth; which do refrigerate; and therefore in thoſe parts noon is nothing ſo hot, when the breezes are great, as about nine or ten of the clock in the forenoon. Another cauſe is, for that the length of the night, and the dews thereof, do compenſate the heat of the day. A third cauſe is the ſtay of the ſun; not in reſpect of day and night, (for that we ſpake of before) but in reſpect of the ſeaſon; for under the line the ſun croſſeth the line, and maketh two ſummers and two winters; but in the ſkirts of the torrid zone it doubleth and goeth back again, and ſo maketh one long ſummer.

*Experiment ſolitary touching the coloration of black and tawny moors.*

399. The heat of the ſun maketh men black in ſome countries, as in *Aethiopia* and *Guinea*, &c. Fire doth it not, as we ſee in glaſs men, that are continually about the fire. The reaſon may be, becauſe fire doth lick up the ſpirits and blood of the body, ſo as they exhale; ſo that it ever maketh men look pale and ſallow; but the ſun, which is a gentler heat, doth but draw the blood to the outward parts; and rather concocteth it than ſoaketh it; and therefore we ſee that all *Aethiopes* are fleſhy and plump, and have great lips; all which betoken moiſture retained, and not drawn out. We ſee alſo, that the negroes are bred in countries that have plenty of water, by rivers, or otherwiſe: for *Meroe*, which was the metropolis of *Aethiopia*, was upon a great lake; and *Congo*, where the negroes are, is full of rivers. And the confines of the river *Niger*, where the negroes alſo are, are well watered: and the region about cape *Verde* is likewiſe moiſt, in ſo much as it is peſtilent through moiſture: but the countries of the *Abyſſenes*, and *Barbary*, and *Peru*, where they are tawny, and olivaſter, and pale, are generally more ſandy and dry. As for the *Aethiopes*, as they are plump and fleſhy; ſo (it may be) they are ſanguine and ruddy coloured, if their black ſkin would ſuffer it to be ſeen.

*Experiment ſolitary touching motion after the inſtant of death.*

400. SOME creatures do move a good while after their head is off; as birds; ſome a very little time; as men and all beaſts; ſome move, though cut in ſeveral pieces; as ſnakes, eels, worms, flies, *&c.* Firſt therefore it is certain, that the immediate cauſe of death, is the reſolution or extinguiſhment of the ſpirits; and that the deſtruction or corruption of the organs, is but the mediate cauſe. But ſome organs are ſo peremptorily neceſſary, that the extinguiſhment of the ſpirits doth ſpeedily follow; but yet ſo as there is an interim of a ſmall time. It is reported by one of the ancients, of credit, that a ſacrificed beaſt hath lowed after the heart hath been ſevered; and it is a report alſo of credit, that the head of a pig hath been opened, and the brain put into the palm of a man's hand trembling, without breaking any part of it, or ſevering it from the marrow of the back-bone; during which time the pig hath been, in all appearance, ſtark dead, and without motion; and after a ſmall time the brain hath been replaced, and the ſkull of the pig cloſed, and the pig hath a little after gone about. And certain it is, that an eye upon revenge hath been thruſt forth, ſo as it hanged a pretty diſtance by the viſual nerve; and during that time the eye hath been without any power of ſight; and yet after (being replaced) recovered ſight. Now the ſpirits are chiefly in the head and cells of the brain, which in men and beaſts are large; and therefore when the head is off, they move little or nothing. But birds have ſmall heads, and therefore the ſpirits are a little more diſperſed in the ſinews, whereby motion remaineth in them a little longer; in ſo much as it is extant in ſtory, that an Emperor of *Rome*, to ſhew the certainty of his hand, did ſhoot a great forked arrow at an oſtrich, as ſhe ran ſwiftly upon the ſtage, and ſtruck off her head; and yet ſhe continued the race a little way with the head off. As for worms, and flies, and eels, the ſpirits are diffuſed almoſt all over; and therefore they move in their ſeveral pieces.

NATU-

# NATURAL HISTORY.

## CENT. V.

*Experiments in conſort touching the acceleration of germination.*

WE will now enquire of plants or vegetables: and we ſhall do it with diligence. They are the principal part of the third day's work. They are the firſt *producat*, which is the word of animation: for the other words are but the words of eſſence; and they are of excellent and general uſe for food, medicine, and a number of mechanical arts.

401. THERE were ſown in a bed, turnip-ſeed, radiſh-ſeed, wheat, cucumber-ſeed and peaſe. The bed we call a hot bed, and the manner of it is this: there was taken horſe dung, old and well rotted; this was laid upon a bank half a foot high, and ſupported round about with planks; and upon the top was caſt ſifted earth, ſome two fingers deep; and then the ſeed ſprinkled upon it, having been ſteeped all night in water mixed with cow dung. The turnip-ſeed and the wheat came up half an inch above ground within two days after, without any watering. The reſt the third day. The experiment was made in *October*; and (it may be) in the ſpring, the accelerating would have been the ſpeedier. This is a noble experiment; for without this help they would have been four times as long in coming up. But there doth not occur to me, at this preſent, any uſe thereof for profit; except it ſhould be for ſowing of peaſe, which have their price very much increaſed by the early coming. It may be tried alſo with cherries, ſtrawberries, and other fruit, which are deareſt when they come early.

402. THERE was wheat ſteeped in water mixed with cow dung; other in water mixed with horſe dung; other in water mixed with pigeon dung; other in urine of man; other in water mixed with chalk powdred; other in water mixed with ſoot; other in water mixed with aſhes; other in water mixed with bay-ſalt; other in claret-wine; other in malmſey; other in ſpirit of wine. The proportion of the mixture was, a fourth part of the ingredients to the water; ſave that there was not of the ſalt above an eighth part. The urine, and wines, and ſpirit of wine, were ſimple without mixture of water. The time of the ſteeping was twelve hours. The time of the year *October*. There was alſo other wheat ſown unſteeped, but watered twice a day with warm water. There was alſo other wheat ſown ſimple to compare it with the reſt. The event was; that thoſe that were in the mixture of dung, and urine, and ſoot, chalk, aſhes and ſalt, came up within ſix days: and thoſe that

that afterwards proved the higheſt, thickeſt, and moſt luſty, were firſt the urine; and then the dungs; next the chalk; next the ſoot; next the aſhes; next the ſalt; next the wheat ſimple of it ſelf, unſteeped and unwatered; next the watered twice a day with warm water; next the claret-wine. So that theſe three laſt were ſlower than the ordinary wheat of it ſelf; and this culture did rather retard than advance. As for thoſe that were ſteeped in malmſey and ſpirit of wine, they came not up at all. This is a rich experiment for profit; for the moſt of the ſteepings are cheap things; and the goodneſs of the crop is a great matter of gain; if the goodneſs of the crop anſwer the earlineſs of the coming up: as it is like it will; both being from the vigour of the ſeed; which alſo partly appeared in the former experiments, as hath been ſaid. This experiment would be tried in other grains, ſeeds and kernels: for it may be ſome ſteeping will agree beſt with ſome ſeeds. It would be tried alſo with roots ſteeped as before, but for longer time. It would be tried alſo in ſeveral ſeaſons of the year, eſpecially the ſpring.

403. STRAWBERRIES watered now and then (as once in three days) with water, wherein hath been ſteeped ſheeps dung or pigeons dung, will prevent and come early. And it is like the ſame effect would follow in other berries, herbs, flowers, grains or trees. And therefore it is an experiment, though vulgar in ſtrawberries, yet not brought into uſe generally: for it is uſual to help the ground with muck; and likewiſe to recomfort it ſometimes with muck put to the roots; but to water it with muck water, which is like to be more forcible, is not practiſed.

404. DUNG, or chalk, or blood, applied in ſubſtance (ſeaſonably) to the roots of trees, doth ſet them forwards. But to do it unto herbs, without mixture of water or earth, it may be theſe helps are too hot.

405. THE former means of helping germination, are either by the goodneſs and ſtrength of the nouriſhment; or by the comforting and exciting the ſpirits in the plant, to draw the nouriſhment better. And of this latter kind, concerning the comforting of the ſpirits of the plant, are alſo the experiments that follow; though they be not applications to the root or ſeed. The planting of trees warm upon a wall againſt the ſouth, or ſouth-eaſt ſun, doth haſten their coming on and ripening; and the ſouth-eaſt is found to be better than the ſouth-weſt, though the ſouth-weſt be the hotter coaſt. But the cauſe is chiefly, for that the heat of the morning ſucceedeth the cold of the night: and partly, becauſe (many times) the ſouth-weſt ſun is too parching. So likewiſe the planting of them upon the back of a chimney where a fire is kept, doth haſten their coming on and ripening: nay more, the drawing of the boughs into the inſide of a room where a fire is continually kept, worketh the ſame effect; which hath been tried with grapes; in ſo much as they will come a month earlier than the grapes abroad.

406. BESIDES the two means of accelerating germination formerly deſcribed; that is to ſay, the mending of the nouriſhment; comforting of the ſpirit of the plant; there is a third, which is the making way for the eaſy coming to the nouriſhment, and drawing it. And therefore gentle digging and looſening of the earth about the roots of trees; and the removing herbs and flowers into new earth once in two years, (which is the ſame thing; for the new earth is ever looſer) doth greatly further the proſpering and earlineſs of plants.

407. BUT the moſt admirable acceleration by facilitating the nouriſhment, is that of water. For a ſtandard of a damaſk roſe with the root on, was ſet in a chamber where no fire was, upright in an earthen pan, full of fair water,

water, without any mixture, half a foot under the water, the ſtandard being more than two foot high above the water: within the ſpace of ten days the ſtandard did put forth a fair green leaf, and ſome other little buds, which ſtood at a ſtay, without any ſhew of decay or withering, more than ſeven days. But afterwards that leaf faded, but the young buds did ſprout on; which afterward opened into fair leaves in the ſpace of three months; and continued ſo a while after, till upon removal we left the trial. But note that the leaves were ſomewhat paler and lighter-coloured, than the leaves uſe to be abroad. Note that the firſt buds were in the end of *October*; and it is likely that if it had been in the ſpring time, it would have put forth with greater ſtrength, and (it may be) to have grown on to bear flowers. By this means you may have (as it ſeemeth) roſes ſet in the midſt of a pool, being ſupported with ſome ſtay; which is matter of rareneſs and pleaſure, though of ſmall uſe. This is the more ſtrange, for that the like roſe-ſtandard was put at the ſame time into water mixed with horſe dung, the horſe dung about the fourth part to the water, and in four months ſpace (while it was obſerved) put not forth any leaf, though divers buds at the firſt, as the other.

408. A *Dutch* flower that had a bulbous root, was likewiſe put at the ſame time all under water, ſome two or three fingers deep; and within ſeven days ſprouted, and continued long after a further growing. There were alſo put in a beet root, a borage root, and a radiſh root, which had all their leaves cut almoſt cloſe to the roots; and within ſix weeks had fair leaves; and ſo continued till the end of *November*.

409. Note, that if roots, or peaſe, or flowers, may be accelerated in their coming and ripening, there is a double profit; the one in the high price that thoſe things bear when they come early: the other in the ſwiftneſs of their returns: for in ſome grounds which are ſtrong, you ſhall have a radiſh, *&c.* come in a month; that in other grounds will not come in two; and ſo make double returns.

410. Wheat alſo was put into the water, and came not forth at all; ſo as it ſeemeth there muſt be ſome ſtrength and bulk in the body put into the water, as it is in roots; for grains, or ſeeds, the cold of the water will mortify. But caſually ſome wheat lay under the pan, which was ſomewhat moiſtened by the ſuing of the pan; which in ſix weeks (as aforeſaid) looked mouldy to the eye, but it was ſprouted forth half a finger's length.

411. It ſeemeth by theſe inſtances of water, that for nouriſhment the water is almoſt all in all, and that the earth doth but keep the plant upright, and ſave it from over-heat and over-cold; and therefore is a comfortable experiment for good drinkers. It proveth alſo that our former opinion; that drink incorporate with fleſh or roots, (as in capon-beer, *&c.*) will nouriſh more eaſily, than meat and drink taken ſeverally.

412. The houſing of plants (I conceive) will both accelerate germination, and bring forth flowers and plants in the colder ſeaſons: and as we houſe hot-countrey plants, as lemons, oranges, myrtles, to ſave them; ſo we may houſe our own countrey plants, to forward them, and make them come in the cold ſeaſons; in ſuch ſort, that you may have violets, ſtrawberries, peaſe, all winter: ſo that you ſow or remove them at fit times. This experiment is to be referred unto the comforting of the ſpirit of the plant by warmth, as well as houſing their boughs, *&c.* So then the means to accelerate germination, are in particular eight, in general three.

*Expe-*

*Experiments in conſort touching the putting back or retardation of germination.*

413. To make roſes, or other flowers come late, it is an experiment of pleaſure. For the ancients eſteemed much of the *roſa ſera*. And indeed the *November* roſe is the ſweeteſt, having been leſs exhaled by the Sun. The means are theſe. Firſt, the cutting off their tops immediately after they have done bearing; and then they will come again the ſame year about *November*: but they will not come juſt on the tops, where they were cut, but out of thoſe ſhoots, which were (as it were) water boughs. The cauſe is, for that the ſap, which otherwiſe would have fed the top, (though after bearing) will, by the diſcharge of that, divert unto the ſide ſprouts; and they will come to bear, but later.

414. THE ſecond is the pulling off the buds of the roſe, when they are newly knotted; for then the ſide branches will bear. The cauſe is the ſame with the former: for cutting off the tops, and pulling off the buds, work the ſame effect, in retention of the ſap for a time, and diverſion of it to the ſprouts, that were not ſo forward.

415. THE third is the cutting off ſome few of the top boughs in the ſpring time, but ſuffering the lower boughs to grow on. The cauſe is, for that the boughs do help to draw up the ſap more ſtrongly; and we ſee that in polling of trees, many do uſe to leave a bough or two on the top, to help to draw up the ſap. And it is reported alſo, that if you graft upon the bough of a tree, and cut off ſome of the old boughs, the new cions will periſh.

416. THE fourth is by laying the roots bare about *Chriſtmas* ſome days. The cauſe is plain, for that it doth arreſt the ſap from going upwards for a time; which arreſt is afterwards releaſed by the covering of the root again with earth; and then the ſap getteth up, but later.

417. THE fifth is the removing of the tree ſome months before it buddeth. The cauſe is, for that ſome time will be required after the remove for the re-ſettling, before it can draw the juice; and that time being loſt, the bloſſom muſt needs come forth later.

418. THE ſixth is the grafting of roſes in *May*, which commonly gardeners do not till *July*; and then they bear not till the next year; but if you graft them in *May*, they will bear the ſame year, but late.

419. THE ſeventh is the girding of the body of the tree about with ſome packthread; for that alſo in a degree reſtraineth the ſap, and maketh it come up more late and more ſlowly.

420. THE eighth is the planting of them in a ſhade, or in a hedge; the cauſe is, partly the keeping out of the ſun, which haſteneth the ſap to riſe; and partly the robbing them of nouriſhment, by the ſtuff in the hedge. Theſe means may be practiſed upon other, both trees and flowers, *mutatis mutandis*.

421. MEN have entertained a conceit that ſheweth prettily; namely, that if you graft a late-coming fruit upon a ſtock of a fruit-tree that cometh early, the graft will bear fruit early; as a peach upon a cherry; and contrariwiſe, if an early-coming fruit upon a ſtock of a fruit-tree that cometh late, the graft will bear fruit late; as a cherry upon a peach. But theſe are but imaginations, and untrue. The cauſe is, for that the cion over-ruleth the ſtock quite; and the ſtock is but paſſive only, and giveth aliment, but no motion to the graft.

*Experiments in conſort touching the melioration of fruits, trees and plants.*

WE will ſpeak now, how to make fruits, flowers and roots larger, in more plenty, and ſweeter than they uſe to be; and how to make the trees themſelves more tall, more ſpread, and more haſty and ſudden than they uſe to be: Wherein there is no doubt, but the former experiments of acceleration will ſerve much to theſe purpoſes. And again, that theſe experiments, which we ſhall now ſet down, do ſerve alſo for acceleration, becauſe both effects proceed from the encreaſe of vigour in the tree; but yet to avoid confuſion, and becauſe ſome of the means are more proper for the one effect, and ſome for the other, we will handle them apart.

422. IT is an aſſured experience, that an heap of flint, or ſtone, laid about the bottom of a wild tree, (as an oak, elm, aſh, *&c.*) upon the firſt planting, doth make it proſper double as much as without it. The cauſe is, for that it retaineth the moiſture which falleth at any time upon the tree, and ſuffereth it not to be exhaled by the ſun. Again, it keepeth the tree warm from cold blaſts and froſts, as it were in an houſe. It may be alſo there is ſomewhat in the keeping of it ſteddy at the firſt. *Quaere*, if laying of ſtraw ſome height about the body of a tree, will not make the tree forwards. For though the root giveth the ſap, yet it is the body that draweth it. But you muſt note, that if you lay ſtones about the ſtalk of lettuce, or other plants that are more ſoft, it will over-moiſten the roots, ſo as the worms will eat them.

423. A tree, at the firſt ſetting, ſhould not be ſhaken, until it hath taken root fully: and therefore ſome have put two little forks about the bottom of their trees to keep them upright; but after a year's rooting, then ſhaking doth the tree good, by looſening of the earth, and (perhaps) by exerciſing (as it were) and ſtirring the ſap of the tree.

424. GENERALLY the cutting away of boughs and ſuckers at the root and body doth make trees grow high; and contrariwiſe, the polling and cutting of the top maketh them grow ſpread and buſhy. As we ſee in pollards, *&c.*

425. IT is reported, that to make haſty growing coppice woods, the way is, to take willow, ſallow, poplar, alder, of ſome ſeven years growth; and to ſet them, not upright, but aſlope, a reaſonable depth under the ground; and then inſtead of one root they will put forth many, and ſo carry more ſhoots upon a ſtem.

426. WHEN you would have many new roots of fruit trees, take a low tree and bow it, and lay all his branches aflat upon the ground, and caſt earth upon them; and every twig will take root. And this is a very profitable experiment for coſtly trees, (for the boughs will make ſtocks without charge;) ſuch as are apricots, peaches, almonds, cornelians, mulberries, figs, *&c.* The like is continually practiſed with vines, roſes, muſk-roſes, *&c.*

427. FROM *May* to *July* you may take off the bark of any bough, being of the bigneſs of three or four inches, and cover the bare place ſomewhat above and below, with loam well tempered with horſe-dung, binding it faſt down. Then cut off the bough about *Allhollontide* in the bare place, and ſet it in the ground; and it will grow to be a fair tree in one year. The cauſe may be, for that the baring from the bark keepeth the ſap from deſcending towards winter, and ſo holdeth it in the bough; and it may be alſo that the loam and horſe-dung applied to the bare place do moiſten it, and cheriſh it, and make it more apt to put forth the root. Note, that this

may

may be a general means for keeping up the ſap of trees in their boughs; which may ſerve to other effects.

428. IT hath been practiſed in trees that ſhew fair and bear not, to bore a hole through the heart of the tree, and thereupon it will bear. Which may be, for that the tree before had too much repletion, and was oppreſſed with its own ſap; for repletion is an enemy to generation.

429. IT hath been practiſed in trees that do not bear, to cleave two or three of the chief roots, and to put into the cleft a ſmall pebble, which may keep it open, and then it will bear. The cauſe may be, for that a root of a tree may be (as it were) hide-bound, no leſs than the body of the tree; but it will not keep open without ſomewhat put into it.

430. IT is uſually practiſed, to ſet trees that require much ſun upon walls againſt the ſouth; as apricots, peaches, plumbs, vines, figs, and the like. It hath a double commodity; the one, the heat of the wall by reflexion; the other, the taking away of the ſhade; for when a tree groweth round, the upper boughs overſhadow the lower: but when it is ſpread upon a wall, the ſun cometh alike, upon the upper and lower branches.

431. IT hath alſo been practiſed (by ſome) to pull off ſome leaves from the trees ſo ſpread, that the ſun may come upon the bough and fruit the better. There hath been practiſed alſo a curioſity, to ſet a tree upon the north ſide of a wall, and at a little height, to draw it through the wall, and ſpread it upon the ſouth ſide: conceiving that the root and lower part of the ſtock ſhould enjoy the freſhneſs of the ſhade; and the upper boughs, and fruit, the comfort of the ſun. But it ſorted not; the cauſe is, for that the root requireth ſome comfort of the ſun, though under earth, as well as the body: and the lower part of the body more than the upper, as we ſee in compaſſing a tree below with ſtraw.

432. THE lowneſs of the bough where the fruit cometh, maketh the fruit greater, and to ripen better; for you ſhall ever ſee, in apricots, peaches, or melo-cotones upon a wall, the greateſt fruits towards the bottom. And in *France*, the grapes that make the wine, grow upon low vines bound to ſmall ſtakes; and the raiſed vines in arbors make but verjuice. It is true, that in *Italy*, and other countries where they have hotter ſun, they raiſe them upon elms and trees; but I conceive, that if the *French* manner of planting low were brought in uſe there, their wines would be ſtronger and ſweeter. But it is more chargeable in reſpect of the props. It were good to try whether a tree grafted ſomewhat near the ground, and the lower boughs only maintained, and the higher continually pruned off, would not make a larger fruit.

433. To have fruit in greater plenty, the way is, to graft, not only upon young ſtocks, but upon divers boughs of an old tree; for they will bear great numbers of fruit: whereas if you graft but upon one ſtock, the tree can bear but few.

434. THE digging yearly about the roots of trees, which is a great means both to the acceleration and melioration of fruits, is practiſed in nothing but in vines; which if it were transferred unto other trees and ſhrubs, (as roſes, *&c.*) I conceive would advance them likewiſe.

435. IT hath been known, that a fruit-tree hath been blown up (almoſt) by the roots, and ſet up again, and the next year bear exceedingly. The cauſe of this was nothing but the looſening of the earth, which comforteth any tree, and is fit to be practiſed more than it is in fruit-trees: for trees cannot be ſo fitly removed into new grounds, as flowers and herbs may.

436. To revive an old tree, the digging of it about the roots, and applying new mould to the roots, is the way. We ſee alſo that draught-oxen, put into freſh paſture gather new and tender fleſh; and in all things, better nouriſhment than hath been uſed doth help to renew; eſpecially if it be not only better but changed, and differing from the former.

437. IF an herb be cut off from the roots in the beginning of winter, and then the earth be trodden and beaten down hard with the foot and ſpade, the roots will become of very great magnitude in ſummer. The reaſon is, for that the moiſture being forbidden to come up in the plant, ſtayeth longer in the root, and ſo dilateth it. And gardeners uſe to tread down any looſe ground after they have ſown onions, or turnips, *&c.*

438. IF *panicum* be laid below and about the bottom of a root, it will cauſe the root to grow to an exceſſive bigneſs. The cauſe is, for that being it ſelf of a ſpongy ſubſtance, it draweth the moiſture of the earth to it, and ſo feedeth the root. This is of greateſt uſe for onions, turnips, parſnips, and carrots.

439. THE ſhifting of ground is a means to better the tree and fruit; but with this caution, that all things do proſper beſt when they are advanced to the better: your nurſery of ſtocks ought to be in a more barren ground than the ground is whereunto you remove them. So all graſiers prefer their cattel from meaner paſtures to better. We ſee alſo, that hardneſs in youth lengtheneth life, becauſe it leaveth a cheriſhing to the better of the body in age: nay, in exerciſes, it is good to begin with the hardeſt, as dancing in thick ſhoes, *&c.*

440. IT hath been obſerved, that hacking of trees in their bark, both downright and acroſs, ſo as you may make them rather in ſlices than in continued hacks, doth great good to trees; and eſpecially delivereth them from being hidebound, and killeth their moſs.

441. SHADE to ſome plants conduceth to make them large and proſperous, more than the ſun; as in ſtrawberries and bays, *&c.* Therefore amongſt ſtrawberries ſow here and there ſome borage ſeed; and you ſhall find the ſtrawberries under thoſe leaves far more large than their fellows. And bays you muſt plant to the north, or defend them from the ſun by a hedge-row; and when you ſow the berries, weed not the borders for the firſt half year; for the weed giveth them ſhade.

442. To encreaſe the crops of plants, there would be conſidered not only the encreaſing the luſt of the earth, or of the plant, but the ſaving alſo of that which is ſpilt. So they have lately made a trial to ſet wheat, which nevertheleſs hath been left off, becauſe of the trouble and pains; yet ſo much is true, that there is much ſaved by the ſetting, in compariſon of that which is ſown; both by keeping it from being picked up by birds, and by avoiding the ſhallow lying of it, whereby much that is ſown taketh no root.

443. IT is preſcribed by ſome of the ancients, that you take ſmall trees, upon which figs or other fruit grow, being yet unripe, and cover the trees in the middle of autumn with dung until the ſpring; and then take them up in a warm day, and replant them in good ground; and by that means the former year's tree will be ripe, as by a new birth; when other trees of the ſame kind do but bloſſom. But this ſeemeth to have no great probability.

444. IT is reported, that if you take nitre, and mingle it with water, to the thickneſs of honey, and therewith anoint the bud, after the vine is cut, it will ſprout forth within eight days. The cauſe is like to be (if the experiment be true) the opening of the bud, and of the parts contiguous, by the ſpirit of the nitre; for nitre is (as it were) the life of vegetables.

445. TAKE

445. TAKE ſeed, or kernels of apples, pears, oranges; or a peach, or a plumb-ſtone, *&c.* and put them into a ſquill, (which is like a great onion) and they will come up much earlier than in the earth it ſelf. This I conceive to be as a kind of grafting in the root; for as the ſtock of a graft yieldeth better prepared nouriſhment to the graft, than the crude earth; ſo the ſquill doth the like to the ſeed. And I ſuppoſe the ſame would be done, by putting kernels into a turnip, or the like; ſave that the ſquill is more vigorous and hot. It may be tried alſo, with putting onion-ſeed into an onion-head, which thereby (perhaps) will bring forth a larger and earlier onion.

446. THE pricking of a fruit in ſeveral places, when it is almoſt at its bigneſs, and before it ripeneth, hath been practiſed with ſucceſs, to ripen the fruit more ſuddenly. We ſee the example of the biting of waſps or worms upon fruit, whereby it (manifeſtly) ripeneth the ſooner.

447. IT is reported, that *alga marina*, (ſea-weed) put under the roots of coleworts, and (perhaps) of other plants, will further their growth. The virtue (no doubt) hath relation to ſalt, which is a great help to fertility.

448. IT hath been practiſed, to cut off the ſtalks of cucumbers, immediately after their bearing, cloſe by the earth; and then to caſt a pretty quantity of earth upon the plant that remaineth, and they will bear the next year fruit long before the ordinary time. The cauſe may be, for that the ſap goeth down the ſooner, and is not ſpent in the ſtalk or leaf, which remaineth after the fruit. Where note, that the dying in the winter of the roots of plants that are annual, ſeemeth to be partly cauſed by the over-expence of the ſap into ſtalk and leaves; which being prevented, they will ſuper-annuate, if they ſtand warm.

449. THE pulling off many of the bloſſoms from a fruit tree, doth make the fruit fairer. The cauſe is manifeſt; for that the ſap hath the leſs to nouriſh. And it is a common experience, that if you do not pull off ſome bloſſoms the firſt time a tree bloometh, it will bloſſom it ſelf to death.

450. IT were good to try, what would be the effect, if all the bloſſoms were pulled from a fruit tree; or the acorns and cheſtnut buds, *&c.* from a wild tree, for two years together. I ſuppoſe that the tree will either put forth the third year bigger and more plentiful fruit; or elſe, the ſame years, larger leaves, becauſe of the ſap ſtored up.

451. IT hath been generally received, that a plant watered with warm water, will come up ſooner and better, than with cold water or with ſhowers. But our experiment of watering wheat with warm water (as hath been ſaid) ſucceeded not; which may be, becauſe the trial was too late in the year, *viz.* in the end of *October*. For the cold then coming upon the ſeed, after it was made more tender by the warm water, might check it.

452. THERE is no doubt, but that grafting (for the moſt part) doth meliorate the fruit. The cauſe is manifeſt; for that the nouriſhment is better prepared in the ſtock, than in the crude earth: but yet note well, that there be ſome trees, that are ſaid to come up more happily from the kernel than from the graft; as the peach and melocotone. The cauſe I ſuppoſe to be, for that thoſe plants require a nouriſhment of great moiſture; and though the nouriſhment of the ſtock be finer and better prepared, yet it is not ſo moiſt and plentiful as the nouriſhment of the earth. And indeed we ſee thoſe fruits are very cold fruits in their nature.

453. IT hath been received, that a ſmaller pear grafted upon a ſtock that beareth a greater pear, will become great. But I think it is as true, as that

of

of the prime fruit upon the late ſtock; and *e contraverſo*; which we rejected before: for the cions will govern. Nevertheleſs, it is probable enough, that if you can get a cion to grow upon a ſtock of another kind, that is much moiſter than its own ſtock, it may make the fruit greater, becauſe it will yield more plentiful nouriſhment; though it is like it will make the fruit baſer. But generally the grafting is upon a drier ſtock; as the apple upon a crab; the pear upon a thorn, *&c.* Yet it is reported, that in the *Low-Countries* they will graft an apple cion upon the ſtock of a colewort, and it will bear a great flaggy apple; the kernel of which, if it be ſet, will be a colewort, and not an apple. It were good to try, whether an apple cion will proſper, if it be grafted upon a ſallow, or upon a poplar, or upon an alder, or upon an elm, or upon an horſe-plumb, which are the moiſteſt of trees. I have heard that it hath been tried upon an elm and ſucceeded.

454. It is manifeſt by experience, that flowers removed wax greater, becauſe the nouriſhment is more eaſily come by in the looſe earth. It may be, that oft regrafting of the ſame cions, may likewiſe make fruit greater; as if you take a cion, and graft it upon a ſtock the firſt year; and then cut it off, and graft it upon another ſtock the ſecond year; and ſo for a third or fourth year; and then let it reſt, it will yield afterward when it beareth the greater fruit.

Of grafting there are many experiments worth the noting, but thoſe we reſerve to a proper place.

455. It maketh figs better, if a fig-tree, when it beginneth to put forth leaves, have his top cut off. The cauſe is plain, for that the ſap hath the leſs to feed, and the leſs way to mount: but it may be the fig will come ſomewhat later, as was formerly touched. The ſame may be tried likewiſe in other trees.

456. It is reported, that mulberries will be fairer, and the trees more fruitful, if you bore the trunk of the tree through in ſeveral places, and thruſt into the places bored wedges of ſome hot trees, as turpentine, maſtick tree, guaiacum, juniper, *&c.* The cauſe may be, for that adventive heat doth chear up the native juice of the tree.

457. It is reported, that trees will grow greater, and bear better fruit, if you put ſalt, or lees of wine, or blood to the root. The cauſe may be the encreaſing the luſt or ſpirit of the root; theſe things being more forcible than ordinary compoſts.

458. It is reported by one of the ancients, that artichoaks will be leſs prickly, and more tender, if the ſeeds have their tops dulled, or grated off upon a ſtone.

459. Herbs will be tenderer and fairer, if you take them out of beds, when they are newly come up, and remove them into pots with better earth. The remove from bed to bed was ſpoken of before; but that was in ſeveral years; this is upon the ſudden. The cauſe is the ſame with other removes formerly mentioned.

460. Coleworts are reported by one of the ancients to proſper exceedingly, and to be better taſted if they be ſometimes watred with ſalt water; and much more with water mixed with nitre; the ſpirit of which is leſs adurent than ſalt.

461. It is reported, that cucumbers will prove more tender and dainty, if their ſeeds be ſteeped (a little) in milk; the cauſe may be, for that the ſeed being mollified with the milk, will be too weak to draw the groſſer juice of the earth, but only the finer. The ſame experiment may be made in artichoaks

choaks and other ſeeds, when you would take away either their flaſhineſs or bitterneſs. They ſpeak alſo, that the like effect followeth, of ſteeping in water mixed with honey; but that ſeemeth to me not ſo probable, becauſe honey hath too quick a ſpirit.

462. It is reported, that cucumbers will be leſs watry, and more melon-like, if in the pit where you ſet them, you fill it (half-way up) with chaff, or ſmall ſticks, and then pour earth upon them; for cucumbers, as it ſeemeth, do extremely affect moiſture, and over-drink themſelves; which this chaff or chips forbiddeth. Nay, it is farther reported, that if when a cucumber is grown, you ſet a pot of water about five or ſix inches diſtance from it, it will, in twenty four hours, ſhoot ſo much out as to touch the pot; which, if it be true, is an experiment of an higher nature than belongeth to this title: for it diſcovereth perception in plants, to move towards that which ſhould help and comfort them, though it be at a diſtance. The ancient tradition of the vine is far more ſtrange; it is, that if you ſet a ſtake or prop ſome diſtance from it, it will grow that way; which is far ſtranger (as is ſaid) than the other: for that water may work by a ſympathy of attraction; but this of the ſtake ſeemeth to be a reaſonable diſcourſe.

463. It hath been touched before, that terebration of trees doth make them proſper better. But it is found alſo, that it maketh the fruit ſweeter and better. The cauſe is, for that notwithſtanding the terebration, they may receive aliment ſufficient; and yet no more than they can well turn and digeſt; and withal do ſweat out the coarſeſt and unprofitableſt juice; even as it is in living creatures, which by moderate feeding, and exerciſe, and ſweat, attain the ſoundeſt habit of body.

464. As terebration doth meliorate fruit, ſo upon the like reaſon doth letting of plants blood; as pricking vines, or other trees, after they be of ſome growth; and thereby letting forth gum or tears; though this be not to continue, as it is in terebration, but at ſome ſeaſons. And it is reported, that by this artifice bitter almonds have been turned into ſweet.

465. The ancients for the dulcorating of fruit, do commend ſwines dung above all other dung; which may be becauſe of the moiſture of that beaſt, whereby the excrement hath leſs acrimony; for we ſee ſwines and pigs fleſh is the moiſteſt of fleſh.

466. It is obſerved by ſome, that all herbs wax ſweeter, both in ſmell and taſte, if after they be grown up ſome reaſonable time, they be cut, and ſo you take the later ſprout. The cauſe may be, for that the longer the juice ſtayeth in the root and ſtalk, the better it concocteth. For one of the chief cauſes why grains, ſeeds and fruits, are more nouriſhing than leaves, is the length of time in which they grow to maturation. It were not amiſs to keep back the ſap of herbs, or the like, by ſome fit means, till the end of ſummer; whereby (it may be) they will be more nouriſhing.

467. As grafting doth generally advance and meliorate fruits, above that which they would be if they were ſet of kernels or ſtones, in regard the nouriſhment is better concocted; ſo (no doubt) even in grafting, for the ſame cauſe, the choice of the ſtock doth much; always provided, that it be ſomewhat inferiour to the cion: for otherwiſe it dulleth it. They commend much the grafting of pears or apples upon a quince.

468. Besides the means of melioration of fruits before mentioned, it is ſet down as tried, that a mixture of bran and ſwines dung, or chaff and ſwines dung, (eſpecially laid up together for a month to rot) is a very great nouriſher and comforter to a fruit-tree.

469. It is delivered, that onions wax greater if they be taken out of the earth, and laid a drying twenty days, and then ſet again; and yet more, if the outermoſt pill be taken off all over.

470. It is delivered by ſome, that if one take the bough of a low fruit-tree newly budded, and draw it gently without hurting it into an earthen pot, perforate at the bottom to let in the plant, and then cover the pot with earth, it will yield a very large fruit within the ground. Which experiment is nothing but potting of plants without removing, and leaving the fruit in the earth. The like (they ſay) will be effected by an empty pot without earth in it, put over a fruit, being propped up with a ſtake as it hangeth upon the tree; and the better, if ſome few pertuſions be made in the pot. Wherein, beſides the defending of the fruit from extremity of ſun or weather, ſome give a reaſon, that the fruit loving and coveting the open air and ſun, is invited by thoſe pertuſions to ſpread and approach as near the open air as it can; and ſo enlargeth in magnitude.

471. All trees in high and ſandy grounds are to be ſet deep; and in watry grounds more ſhallow. And in all trees, when they be removed, (eſpecially fruit-trees) care ought to be taken, that the ſides of the trees be coaſted, (north and ſouth, *&c.*) as they ſtood before. The ſame is ſaid alſo of ſtone out of the quarry, to make it more durable; though that ſeemeth to have leſs reaſon; becauſe the ſtone lieth not ſo near the ſun, as the tree groweth.

472. Timber trees in a coppice wood, do grow better than in an open field; both becauſe they offer not to ſpread ſo much, but ſhoot up ſtill in height; and chiefly becauſe they are defended from too much ſun and wind, which do check the growth of all fruit; and ſo (no doubt) fruit-trees, or vines, ſet upon a wall againſt the ſun, between elbows or buttreſſes of ſtone, ripen more than upon a plain wall.

473. It is ſaid, that if potado-roots be ſet in a pot filled with earth, and then the pot with earth be ſet likewiſe within the ground ſome two or three inches, the roots will grow greater than ordinary. The cauſe may be, for that having earth enough within the pot to nouriſh them; and then being ſtopped by the bottom of the pot from putting ſtrings downward, they muſt needs grow greater in breadth and thickneſs. And it may be, that all ſeeds or roots potted, and ſo ſet into the earth, will proſper the better.

474. The cutting off the leaves of radiſh, or other roots, in the beginning of winter, before they wither, and covering again the root ſomething high with earth, will preſerve the root all winter, and make it bigger in the ſpring following, as hath been partly touched before. So that there is a double uſe of this cutting off the leaves; for in plants where the root is the eſculent, as radiſh and parſnips, it will make the root the greater; and ſo it will do to the heads of onions. And where the fruit is the eſculent, by ſtrengthning the root, it will make the fruit alſo the greater.

475. It is an experiment of great pleaſure, to make the leaves of ſhady trees larger than ordinary. It hath been tried (for certain) that a cion of a weech elm, grafted upon the ſtock of an ordinary elm, will put forth leaves almoſt as broad as the brim of one's hat. And it is very likely, that as in fruit-trees the graft maketh a greater fruit; ſo in trees that bear no fruit, it will make the greater leaves. It would be tried therefore in trees of that kind chiefly, as birch, aſp, willow; and eſpecially the ſhining willow, which they call ſwallow-tail, becauſe of the pleaſure of the leaf.

476. The barrenneſs of trees by accident, (beſides the weakneſs of the ſoil,

ſoil, ſeed, or root; and the injury of the weather) cometh either of their over-growing with moſs, or their being hide-bound, or their planting too deep, or by iſſuing of the ſap too much into the leaves. For all theſe there are remedies mentioned before.

*Experiments in conſort touching compound fruits and flowers.*

WE ſee that in living creatures, that have male and female, there is copulation of ſeveral kinds; and ſo compound creatures; as the mule, that is generated betwixt the horſe and the aſs; and ſome other compounds which we call monſters, though more rare: and it is held that that proverb, *Africa ſemper aliquid monſtri parit*, cometh, for that the fountains of waters there being rare, divers ſorts of beaſts come from ſeveral parts to drink; and ſo being refreſhed, fall to couple, and many times with ſeveral kinds. The compounding or mixture of kinds in plants is not found out; which nevertheleſs, if it be poſſible, is more at command than that of living creatures; for that their luſt requireth a voluntary motion; wherefore it were one of the moſt notable experiments touching plants to find it out: for ſo you may have great variety of new fruits and flowers yet unknown. Grafting doth it not; that mendeth the fruit, or doubleth the flowers, *&c.* but it hath not the power to make a new kind. For the cion ever over-ruleth the ſtock.

477. IT hath been ſet down by one of the ancients, that if you take two twigs of ſeveral fruit-trees, and flat them on the ſides, and then bind them cloſe together and ſet them in the ground, they will come up in one ſtock; but yet they will put forth their ſeveral fruits without any commixture in the fruit. Wherein note (by the way) that unity of continuance is eaſier to procure than unity of ſpecies. It is reported alſo, that vines of red and white grapes being ſet in the ground, and the upper parts being flatted and bound cloſe together, will put forth grapes of the ſeveral colours upon the ſame branch; and grape ſtones of ſeveral colours within the ſame grape: but the more after a year or two; the unity (as it ſeemeth) growing more perfect. And this will likewiſe help, if from the firſt uniting they be often water'd; for all moiſture helpeth to union. And it is preſcribed alſo to bind the bud as ſoon as it cometh forth, as well as the ſtock, at the leaſt for a time.

478. THEY report, that divers ſeeds put into a clout, and laid in earth well dunged, will put up plants contiguous; which (afterwards) being bound in their ſhoots will incorporate. The like is ſaid of kernels put into a bottle with a narrow mouth filled with earth.

479. IT is reported, that young trees of ſeveral kinds ſet contiguous without any binding, and very often water'd, in a fruitful ground, with the very luxury of the trees, will incorporate and grow together. Which ſeemeth to me the likelieſt means that hath been propounded; for that the binding doth hinder the natural ſwelling of the tree; which while it is in motion doth better unite.

*Experiments in conſort touching the ſympathy and antipathy of plants.*

THERE are many ancient and received traditions and obſervations touching the ſympathy and antipathy of plants; for that ſome will thrive beſt growing near others, which they impute to ſympathy; and ſome worſe, which they impute to antipathy. But theſe are idle and ignorant conceits, and forſake the true indication of the cauſes, as the moſt part of Experi-

ments that concern ſympathies and antipathies do. For as to plants, neither is there any ſuch ſecret friendſhip or hatred as they imagine; and if we ſhould be content to call it ſympathy and antipathy, it is utterly miſtaken; for their ſympathy is an antipathy, and their antipathy is a ſympathy: for it is thus; whereſoever one plant draweth ſuch a particular juice out of the earth, as it qualifieth the earth, ſo as that juice which remaineth is fit for the other plant; there the neighbourhood doth good, becauſe the nouriſhments are contrary or ſeveral: but where two plants draw (much) the ſame juice, there the neighbourhood hurteth, for the one deceiveth the other.

480. FIRST therefore, all plants that do draw much nouriſhment from the earth, and ſo ſoak the earth and exhauſt it, hurt all things that grow by them; as great trees, (eſpecially aſhes,) and ſuch trees as ſpread their roots near the top of the ground. So the colewort is not an enemy (though that were anciently received) to the vine only; but it is an enemy to any other plant, becauſe it draweth ſtrongly the fatteſt juice of the earth. And if it be true, that the vine when it creepeth near the colewort will turn away, this may be, becauſe there it findeth worſe nouriſhment; for though the root be where it was, yet (I doubt) the plant will bend as it nouriſheth.

481. WHERE plants are of ſeveral natures, and draw ſeveral juices out of the earth, there (as hath been ſaid) the one ſet by the other helpeth: as it is ſet down by divers of the ancients, that rue doth proſper much, and becometh ſtronger, if it be ſet by a fig-tree; which (we conceive) is cauſed not by reaſon of friendſhip, but by extraction of a contrary juice: the one drawing juice fit to reſult ſweet, the other bitter. So they have ſet down likewiſe, that a roſe ſet by garlick is ſweeter: which likewiſe may be, becauſe the more fetid juice of the earth goeth into the garlick, and the more odorate into the roſe.

482. THIS we ſee manifeſtly, that there be certain corn-flowers which come ſeldom or never in other places, unleſs they be ſet, but only amongſt corn: as the bluebottle, a kind of yellow marygold, wild poppy, and fumitory. Neither can this be, by reaſon of the culture of the ground, by plowing or furrowing; as ſome herbs and flowers will grow but in ditches new caſt; for if the ground lie fallow, and unſown, they will not come: ſo as it ſhould ſeem to be the corn that qualifieth the earth, and prepareth it for their growth.

483. THIS obſervation, if it holdeth, (as it is very probable) is of great uſe for the meliorating of taſte in fruits and eſculent herbs, and of the ſcent of flowers. For I do not doubt, but if the fig-tree do make the rue more ſtrong and bitter, (as the ancients have noted) good ſtore of rue planted about the fig-tree will make the fig more ſweet. Now the taſtes that do moſt offend in fruits, and herbs, and roots, are bitter, harſh, ſour, and watriſh, or flaſhy. It were good therefore to make the trials following:

484. TAKE wormword, or rue, and ſet it near lettuce, or coleflory, or artichoke, and ſee whether the lettuce, or the coleflory, *&c.* become not the ſweeter.

485. TAKE a ſervice tree, or a cornelian tree, or an elder tree, which we know have fruits of harſh and binding juice, and ſet them near a vine, or fig-tree, and ſee whether the grapes or figs will not be the ſweeter.

486. TAKE cucumbers, or pumpions, and ſet them (here and there) a-

mongſt muſk-melons, and ſee whether the melons will not be more winy, and better taſted. Set cucumbers (likewiſe) amongſt radiſh, and ſee whether the radiſh will not be made the more biting.

487. TAKE ſorrel, and ſet it amongſt raſps, and ſee whether the raſps will not be the ſweeter.

488. TAKE common briar, and ſet it amongſt violets or wall-flowers, and ſee whether it will not make the violets or wall-flowers ſweeter, and leſs earthy in their ſmell. So ſet lettuce, or cucumbers, amongſt roſemary or bays, and ſee whether the roſemary or bays will not be the more odorate or aromatical.

489. CONTRARIWISE, you muſt take heed how you ſet herbs together, that draw much the like juice. And therefore I think roſemary will loſe in ſweetneſs, if it be ſet with lavender, or bays, or the like. But yet if you will correct the ſtrength of an herb, you ſhall do well to ſet other like herbs by him to take him down; and if you ſhould ſet tanſey by angelica, it may be the angelica would be the weaker, and fitter for mixture in perfume. And if you ſhould ſet rue by common wormwood, it may be the wormwood would turn to be liker Roman wormwood.

490. THIS axiom is of large extent; and therefore would be ſevered, and refined by trial. Neither muſt you expect to have a groſs difference by this kind of culture, but only farther perfection.

491. TRYAL would be alſo made in herbs poiſonous and purgative, whoſe ill quality (perhaps) may be diſcharged, or attempted, by ſetting ſtronger poiſons or purgatives by them.

492. IT is reported, that the ſhrub called our ladies ſeal, (which is a kind of briony) and coleworts, ſet near together, one or both will die. The cauſe is, for that they be both great depredators of the earth, and one of them ſtarveth the other. The like is ſaid of a reed and a brake; both which are ſucculent; and therefore the one deceiveth the other. And the like of hemlock and rue; both which draw ſtrong juices.

493. SOME of the ancients, and likewiſe divers of the modern writers, that have laboured in natural magick, have noted a ſympathy between the ſun, moon, and ſome principal ſtars; and certain herbs and plants. And ſo they have denominated ſome herbs ſolar, and ſome lunar; and ſuch like toys put into great words. It is manifeſt that there are ſome flowers that have reſpect to the ſun in two kinds, the one by opening and ſhutting, and the other by bowing and inclining the head. For marygolds, tulips, pimpernel, and indeed moſt flowers, do open and ſpread their leaves abroad when the ſun ſhineth ſerene and fair: and again (in ſome part) cloſe them, or gather them inward, either towards night, or when the ſky is overcaſt. Of this there needeth no ſuch ſolemn reaſon to be aſſigned; as to ſay, that they rejoice at the preſence of the ſun, and mourn at the abſence thereof. For it is nothing elſe but a little loading of the leaves, and ſwelling them at the bottom, with the moiſture of the air; whereas the dry air doth extend them: and they make it a piece of the wonder, that garden-claver will hide the ſtalk when the ſun ſheweth bright; which is nothing but a full expanſion of the leaves. For the bowing and inclining the head, it is found in the great flower of the ſun; in marygolds, wart-wort, mallow flowers, and others. The cauſe is ſomewhat more obſcure than the former; but I take it to be no other, but that the part againſt which the ſun beateth waxeth more faint and flaccid in the ſtalk, and thereby leſs able to ſupport the flower.

494. WHAT a little moiſture will do in vegetables, even though they be dead and ſevered from the earth, appeareth well in the experiment of juglers. They take the beard of an oat; which (if you mark it well) is wreathed at the bottom, and one ſmooth entire ſtraw at the top. They take only the part that is wreathed, and cut off the other, leaving the beard half the breadth of a finger in length. Then they make a little croſs of a quill, long-ways of that part of the quill which hath the pith; and croſs-ways of that piece of the quill without pith; the whole croſs being the breadth of a finger high. Then they prick the bottom where the pith is, and thereinto they put the oaten-beard, leaving half of it ſticking forth of the quill: then they take a little white box of wood to deceive men, as if ſomewhat in the box did work the feat; in which, with a pin, they make a little hole, enough to take the beard, but not to let the croſs ſink down, but to ſtick. Then likewiſe, by way of impoſture, they make a queſtion; as, who is the faireſt woman in the company? or, who hath a glove or card? and cauſe another to name divers perſons: and upon every naming they ſtick the croſs in the box, having firſt put it towards their mouth, as if they charmed it; and the croſs ſtirreth not; but when they come to the perſon that they would take, as they hold the croſs to their mouth, they touch the beard with the tip of their tongue, and wet it; and ſo ſtick the croſs in the box; and then you ſhall ſee it turn finely and ſoftly three or four turns; which is cauſed by the untwining of the beard by the moiſture. You may ſee it more evidently, if you ſtick the croſs between your fingers inſtead of the box; and therefore you may ſee, that this motion, which is effected by ſo little wet, is ſtronger than the cloſing or bending of the head of a marygold.

495. IT is reported by ſome, that the herb called *roſa ſolis*, (whereof they make ſtrong waters) will, at the noon-day, when they ſun ſhineth hot and bright, have a great dew upon it: And therefore, that the right name is *ros ſolis*: which they impute to a delight and ſympathy that it hath with the ſun. Men favour wonders. It were good firſt to be ſure, that the dew that is found upon it, be not the dew of the morning preſerved, when the dew of other herbs is breathed away; for it hath a ſmooth and thick leaf, that doth not diſcharge the dew ſo ſoon as other herbs that are more ſpungy and porous. And it may be purſlane, or ſome other herb, doth the like, and is not marked. But if it be ſo, that it hath more dew at noon than in the morning, then ſure it ſeemeth to be an exudation of the herb it ſelf. As plumbs ſweat when they are ſet into the oven: for you will not (I hope) think, that it is like *Gideon*'s fleece of wool, that the dew ſhould fall upon that and no where elſe.

496. IT is certain, that the honey dews are found more upon oak leaves, than upon aſh, or beech, or the like: but whether any cauſe be from the leaf it ſelf to concoct the dew; or whether it be only that the leaf is cloſe and ſmooth, (and therefore drinketh not in the dew, but preſerveth it;) may be doubted. It would be well enquired, whether manna the drug doth fall but upon certain herbs or leaves only. Flowers that have deep ſockets, do gather in the bottom a kind of honey; as honey-ſuckles, (both the woodbine and the trefoil) lillies, and the like. And in them certainly the flower beareth part with the dew.

497. THE experience is, that the froth which they call woodeſare, (being like a kind of ſpittle) is found but upon certain herbs, and thoſe hot ones;

as

as lavender, lavender-cotton, ſage, hyſſop, &c. Of the cauſe of this enquire farther; for it ſeemeth a ſecret. There falleth alſo mildew upon corn, and ſmutteth it; but it may be, that the ſame falleth alſo upon other herbs, and is not obſerved.

498. It were good trial were made, whether the great conſent between plants and water, which is a principal nouriſhment of them, will make an attraction at diſtance, and not at touch only. Therefore take a veſſel, and in the middle of it make a falſe bottom of coarſe canvas: fill it with earth above the canvas, and let not the earth be watered; then ſow ſome good ſeeds in that earth; but under the canvas, ſome half a foot in the bottom of the veſſel, lay a great ſponge thoroughly wet in water; and let it lie ſo ſome ten days, and ſee whether the ſeeds will ſprout, and the earth become more moiſt, and the ſponge more dry. The experiment formerly mentioned of the cucumber creeping to the pot of water, is far ſtranger than this.

*Experiments in conſort touching the making herbs and fruits medicinable.*

499. The altering of the ſcent, colour, or taſte of fruit, by infuſing, mixing, or letting into the bark, or root of the tree, herb or flower, any coloured, aromatical, or medicinal ſubſtance, are but fancies. The cauſe is, for that thoſe things have paſſed their period, and nouriſh not. And all alteration of vegetables in thoſe qualities, muſt be by ſomewhat that is apt to go into the nouriſhment of the plant. But this is true, that where kine feed upon wild garlick, their milk taſteth plainly of the garlick: and the fleſh of muttons is better taſted where the ſheep feed upon wild thyme, and other wholeſome herbs. *Galen* alſo ſpeaketh of the curing of the *ſcirrus* of the liver, by milk of a cow that feedeth upon certain herbs; and honey in *Spain* ſmelleth (apparently) of the roſemary, or orange, from whence the bee gathereth it: and there is an old tradition of a maiden that was fed with *Napellus*; (which is counted the ſtrongeſt poiſon of all vegetables) which with uſe did not hurt the maid, but poiſoned ſome that had carnal company with her. So it is obſerved by ſome, that there is a virtuous bezoar, and another without virtue, which appear to the ſhew alike: but the virtuous is taken from the beaſt that feedeth upon the mountains, where there are theriacal herbs; and that without virtue, from thoſe that feed in the valleys where no ſuch herbs are. Thus far I am of opinion; that as ſteeped wines and beers are very medicinal; and likewiſe bread tempered with divers powders: ſo of meat alſo, (as fleſh, fiſh, milk and eggs) that they may be made of great uſe for medicine and diet; if the beaſt, fowl, or fiſh, be fed with a ſpecial kind of food fit for the diſeaſe. It were a dangerous thing alſo for ſecret empoiſonments. But whether it may be applied unto plants and herbs I doubt more; becauſe the nouriſhment of them is a more common juice; which is hardly capable of any ſpecial quality, until the plant do aſſimilate it.

500. But leſt our incredulity may prejudice any profitable operations in this kind, (eſpecially ſince many of the ancients have ſet them down) we think good briefly to propound the four means which they have deviſed of making plants medicinable. The firſt is by ſlitting of the root, and infuſing into it the medicine; as hellebore, opium, ſcammony, treacle, &c. and then binding it up again. This ſeemeth to me the leaſt probable; becauſe the root draweth immediately from the earth; and ſo the nouriſh-

ment

ment is the more common and leſs qualified: and beſides, it is a long time in going up ere it come to the fruit. The ſecond way is to perforate the body of the tree, and there to infuſe the medicine; which is ſomewhat better: for if any virtue be received from the medicine, it hath the leſs way, and the leſs time to go up. The third is, the ſteeping of the ſeed or kernel in ſome liquor wherein the medicine is infuſed: which I have little opinion of, becauſe the ſeed (I doubt) will not draw the parts of the matter which have the propriety: but it will be far the more likely, if you mingle the medicine with dung; for that the ſeed naturally drawing the moiſture of the dung, may call in withal ſome of the propriety. The fourth is, the watering of the plant oft with an infuſion of the medicine. This, in one reſpect, may have more force than the reſt, becauſe the medication is oft renewed; whereas the reſt are applied but at one time; and therefore the virtue may the ſooner vaniſh. But ſtill I doubt, that the root is ſomewhat too ſtubborn to receive thoſe fine impreſſions; and beſides, (as I ſaid before) they have a great hill to go up. I judge therefore the likelieſt way to be the perforation of the body of the tree in ſeveral places one above the other; and the filling of the holes with dung mingled with the medicine; and the watering of thoſe lumps of dung, with ſquirts of an infuſion of the medicine in dunged water once in three or four days.

NATU-

# NATURAL HISTORY.

## CENT. VI.

*Experiments in conſort touching curioſities about fruits and plants.*

OUR experiments we take care to be (as we have often ſaid) either *experimenta fructifera*, or *lucifera*; either of uſe or of diſcovery: for we hate impoſtures, and deſpiſe curioſities. Yet becauſe we muſt apply our ſelves ſomewhat to others, we will ſet down ſome curioſities touching plants.

501. IT is a curioſity to have ſeveral fruits upon one tree; and the more when ſome of them come early, and ſome come late; ſo that you may have upon the ſame tree ripe fruits all ſummer. This is eaſily done by grafting of ſeveral cions upon ſeveral boughs, of a ſtock, in a good ground plentifully fed. So you may have all kinds of cherries, and all kinds of plumbs, and peaches, and apricots, upon one tree; but I conceive the diverſity of fruits muſt be ſuch as will graft upon the ſame ſtock. And therefore I doubt, whether you can have apples, or pears, or oranges, upon the ſame ſtock upon which you graft plumbs.

502. IT is a curioſity to have fruits of divers ſhapes and figures. This is eaſily performed, by moulding them when the fruit is young, with moulds of earth or wood. So you may have cucumbers, *&c.* as long as a cane; or as round as a ſphere; or formed like a croſs. You may have alſo apples in the form of pears or lemons. You may have alſo fruit in more accurate figures; as we ſaid, of men, beaſts or birds, according as you make the moulds. Wherein you muſt underſtand, that you make the mould big enough to contain the whole fruit when it is grown to the greateſt: for elſe you will choak the ſpreading of the fruit; which otherwiſe would ſpread it ſelf, and fill the concave, and ſo be turned into the ſhape deſired; as it is in mould works of liquid things. Some doubt may be conceived, that the keeping of the ſun from the fruit may hurt it: but there is ordinary experience of fruit that groweth covered. *Quaere* alſo, whether ſome ſmall holes may not be made in the wood to let in the ſun. And note, that it were beſt to make the moulds partible, glued, or cemented together, that you may open them when you take out the fruit.

503. IT is a curioſity to have inſcriptions, or engravings, in fruit or trees. This is eaſily performed, by writing with a needle, or bodkin, or knife, or the like, when the fruit or trees are young; for as they grow, ſo the letters will grow more large and graphical.

*——Teneriſque meos incidere amores*
*Arboribus; creſcent illae, creſcetis amores.*

504. YOU may have trees apparelled with flowers or herbs, by boring holes in the bodies of them, and putting into them earth holpen with muck, and ſetting ſeeds, or ſlips, of violets, ſtrawberries, wild thyme, camomile, and ſuch like in the earth. Wherein they do but grow in the tree, as they do in pots; though (perhaps) with ſome feeding from the trees. It would be tried alſo with ſhoots of vines, and roots of red roſes; for it may be they being of a more ligneous nature, will incorporate with the tree it ſelf.

505. IT is an ordinary curioſity to form trees and ſhrubs (as roſemary, juniper, and the like) into ſundry ſhapes; which is done by moulding them within, and cutting them without. But they are but lame things, being too ſmall to keep figure: great caſtles made of trees upon frames of timber, with turrets and arches, were anciently matters of magnificence.

506. AMONGST curioſities I ſhall place coloration, though it be ſomewhat better: for beauty in flowers is their preheminence. It is obſerved by ſome, that gilly-flowers, ſweet-williams, violets, that are coloured, if they be neglected, and neither water'd, nor new moulded, nor tranſplanted, will turn white. And it is probable, that the white with much culture may turn coloured. For this is certain, that the white colour cometh of ſcarcity of nouriſhment; except in flowers that are only white, and admit no other colours.

507. IT is good therefore to ſee what natures do accompany what colours; for by that you ſhall have light how to induce colours, by producing thoſe natures. Whites are more inodorate, (for the moſt part) than flowers of the ſame kind coloured; as is found in ſingle white violets, white roſes, white gilly-flowers, white ſtock-gilly-flowers, *&c.* We find alſo, that bloſſoms of trees, that are white, are commonly inodorate, as cherries, pears, plumbs; whereas thoſe of apples, crabs, almonds and peaches, are bluſhy, and ſmell ſweet. The cauſe is, for that the ſubſtance that maketh the flower is of the thinneſt and fineſt of the plant, which alſo maketh flowers to be of ſo dainty colours. And if it be too ſparing and thin, it attaineth no ſtrength of odour, except it be in ſuch plants as are very ſucculent; whereby they need rather to be ſcanted in their nouriſhment than repleniſhed, to have them ſweet. As we ſee in white *ſatyrion*, which is of a dainty ſmell; and in bean-flowers, *&c.* And again, if the plant be of nature to put forth white flowers only, and thoſe not thin or dry, they are commonly of rank and fulſome ſmell; as may-flowers, and white lilies.

508. CONTRARIWISE, in berries the white is commonly more delicate and ſweet in taſte than the coloured, as we ſee in white grapes, in white raſps, in white ſtrawberries, in white currans, *&c.* The cauſe is, for that the coloured are more juiced, and coarſer juiced, and therefore not ſo well and equally concocted; but the white are better proportioned to the digeſtion of the plant.

509. BUT in fruits the white commonly is meaner; as in pear-plumbs, damaſcenes, *&c.* and the choiceſt plumbs are black; the mulberry, (which though they call it a berry, is a fruit) is better the black than the white. The harveſt white plumb is a baſe plumb; and the verdoccio and white date-plumb, are no very good plumbs. The cauſe is, for that they are all over watery; whereas an higher concoction is required for ſweetneſs, or pleaſure of taſte; and therefore all your dainty plumbs are a little dry, and

come

come from the ſtone; as the muſcle-plumb, the damaſcene-plumb, the peach, the apricot, *&c.* yet ſome fruits, which grow not to be black, are of the nature of berries, ſweeteſt ſuch as are paler; as the coeur-cherry, which inclineth more to white, is ſweeter than the red; but the egriot is more ſour.

510. TAKE gilly-flower ſeed, of one kind of gilly-flower, (as of the clove-gilly-flower, which is the moſt common,) and ſow it, and there will come up gilly-flowers, ſome of one colour, and ſome of another, caſually, as the ſeed meeteth with nouriſhment in the earth; ſo that the gardeners find, that they may have two or three roots amongſt an hundred that are rare and of great price; as purple, carnation of ſeveral ſtripes; the cauſe is, (no doubt) that in earth, though it be contiguous, and in one bed, there are very ſeveral juices; and as the ſeed doth caſually meet with them, ſo it cometh forth. And it is noted eſpecially, that thoſe which do come up purple, do always come up ſingle; the juice, as it ſeemeth, not being able to ſuffice a ſucculent colour, and a double leaf. This experiment of ſeveral colours coming up from one ſeed, would be tried alſo in larks-foot, monks-hood, poppy and holyoak.

511. FEW fruits are colour'd red within; the queen-apple is; and another apple, called the roſe-apple; mulberries likewiſe, and grapes, though moſt toward the ſkin. There is a peach alſo that hath a circle of red towards the ſtone: and the egriot cherry is ſomewhat red within; but no pear, nor warden, nor plumb, nor apricot, although they have (many times) red ſides, are coloured within. The cauſe may be enquired.

512. THE general colour of plants is green, which is a colour that no flower is of. There is a greeniſh primroſe, but it is pale, and ſcarce a green. The leaves of ſome trees turn a little murry, or reddiſh; and they be commonly young leaves that do ſo; as it is in oaks, and vines, and hazle. Leaves rot into a yellow; and ſome hollies have part of their leaves yellow, that are (to all ſeeming) as freſh and ſhining as the green. I ſuppoſe alſo, that yellow is a leſs ſucculent colour than green; and a degree nearer white. For it hath been noted, that thoſe yellow leaves of holly ſtand ever towards the north, or north-eaſt. Some roots are yellow, as carrots; and ſome plants blood-red, ſtalk and leaf, and all, as *amaranthus.* Some herbs incline to purple and red; as a kind of ſage doth, and a kind of mint, and *roſa ſolis*, *&c.* And ſome have white leaves, as another kind of ſage, and another kind of mint; but azure and a fair purple are never found in leaves. This ſheweth, that flowers are made of a refined juice of the earth, and ſo are fruits; but leaves of a more coarſe and common.

513. IT is a curioſity alſo to make flowers double, which is effected by often removing them into new earth; as on the contrary part, double flowers, by neglecting, and not removing, prove ſingle. And the way to do it ſpeedily, is to ſow or ſet ſeeds or ſlips of flowers; and as ſoon as they come up, to remove them into new ground that is good. Enquire alſo, whether inoculating of flowers, (as ſtock-gilly-flowers, roſes, muſk-roſes, *&c.*) doth not make them double. There is a cherry-tree that hath double bloſſoms; but that tree beareth no fruit: and it may be, that the ſame means which applied to the tree, doth extremely accelerate the ſap to riſe and break forth, would make the tree ſpend it ſelf in flowers, and thoſe to become double, which were a great pleaſure to ſee; eſpecially in apple-trees, peach-trees, and almond-trees, that have bloſſoms bluſh-colour'd.

514. THE making of fruits without core or ſtone, is likewiſe a curioſity,

and ſomewhat better: becauſe whatſoever maketh them ſo, is like to make them more tender and delicate. If a cion or ſhoot, fit to be ſet in the ground, have the pith finely taken forth, (and not altogether, but ſome of it left, the better to ſave the life,) it will bear a fruit with little or no core or ſtone. And the like is ſaid to be of dividing a quick tree down to the ground, and taking out the pith, and then binding it up again.

515. It is reported alſo, that a citron grafted upon a quince will have ſmall or no ſeeds; and it is very probable, that any four fruit grafted upon a ſtock that beareth a ſweeter fruit, may both make the fruit ſweeter, and more void of the harſh matter of kernels or ſeeds.

516. It is reported, that not only the taking out of the pith, but the ſtopping of the juice of the pith from riſing in the midſt, and turning it to riſe on the outſide, will make the fruit without core or ſtone; as if you ſhould bore a tree clean through, and put a wedge in. It is true, there is ſome affinity between the pith and the kernel, becauſe they are both of a harſh ſubſtance, and both placed in the midſt.

517. It is reported, that trees water'd perpetually with warm water, will make a fruit with little or no core or ſtone. And the rule is general, that whatſoever will make a wild tree a garden tree, will make a garden tree to have leſs core or ſtone.

*Experiments in conſort touching the degenerating of plants, and of the tranſmutation of them one into another.*

518. The rule is certain, that plants for want of culture degenerate to be baſer in the ſame kind; and ſometimes ſo far, as to change into another kind. 1. The ſtanding long, and not being removed, maketh them degenerate. 2. Drought, unleſs the earth of it ſelf be moiſt, doth the like. 3. So doth removing into worſe earth, or forbearing to compoſt the earth; as we ſee that water mint turneth into field mint, and the colewort into rape, by neglect, *&c.*

519. Whatsoever fruit uſeth to be ſet upon a root or a ſlip, if it be ſown, will degenerate. Grapes ſown, figs, almonds, pomgranate kernels ſown, make the fruits degenerate and become wild. And again, moſt of thoſe fruits that uſe to be grafted, if they be ſet of kernels, or ſtones, degenerate. It is true, that peaches (as hath been touched before) do better upon ſtones ſet than upon grafting: and the rule of exception ſhould ſeem to be this; that whatſoever plant requireth much moiſture, proſpereth better upon the ſtone or kernel, than upon the graft. For the ſtock, though it giveth a finer nouriſhment, yet it giveth a ſcanter than the earth at large.

520. Seeds, if they be very old, and yet have ſtrength enough to bring forth a plant, make the plant degenerate. And therefore ſkilful gardeners make trial of the ſeeds before they buy them, whether they be good or no, by putting them into water gently boiled; and if they be good, they will ſprout within half an hour.

521. It is ſtrange which is reported, that baſil too much expoſed to the ſun doth turn into wild thyme; although thoſe two herbs ſeem to have ſmall affinity; but baſil is almoſt the only hot herb that hath fat and ſucculent leaves; which oilineſs, if it be drawn forth by the ſun, it is like it will make a very great change.

522. There is an old tradition, that boughs of oak put into the earth will put forth wild vines: which if it be true, (no doubt) it is not the oak that turneth into a vine, but the oak bough putrefying, qualifieth the earth to put forth a vine of it ſelf.

523. It

523. IT is not impoſſible, and I have heard it verified, that upon cutting down of an old timber tree, the ſtub hath put out ſometimes a tree of another kind; as that beech hath put forth birch; which, if it be true, the cauſe may be, for that the old ſtub is too ſcant of juice to put forth the former tree; and therefore putteth forth a tree of a ſmaller kind that needeth leſs nouriſhment.

524. THERE is an opinion in the countrey, that if the ſame ground be oft ſown with the grain that grew upon it, it will in the end grow to be of a baſer kind.

525. It is certain, that in very ſterile years corn ſown will grow to another kind.

*Grandia ſaepe quibus mandavimus hordea ſulcis,*
*Infelix lolium, & ſteriles dominantur avenae.*

And generally it is a rule, that plants that are brought forth by culture, as corn, will ſooner change into other ſpecies, than thoſe that come of themſelves; for that culture giveth but an adventitious nature, which is more eaſily put off.

THIS work of the tranſmutation of plants one into another, is *inter magnalia naturae*; for the tranſmutation of ſpecies is, in the vulgar philoſophy, pronounced impoſſible: and certainly it is a thing of difficulty, and requireth deep ſearch into nature; but ſeeing there appear ſome manifeſt inſtances of it, the opinion of impoſſibility is to be rejected, and the means thereof to be found out. We ſee, that in living creatures that come of putrefaction, there is much tranſmutation of one into another; as caterpillars turn into flies, *&c.* And it ſhould ſeem probable, that whatſoever creature, having life, is generated without ſeed, that creature will change out of one ſpecies into another. For it is the ſeed, and the nature of it, which locketh and boundeth in the creature, that it doth not expatiate. So as we may well conclude, that ſeeing the earth of it ſelf doth put forth plants without ſeed, therefore plants may well have a tranſmigration of ſpecies. Wherefore, wanting inſtances which do occur, we ſhall give inſtances of the moſt likely trials: and generally we would not have thoſe that read this work of *ſylva ſylvarum* account it ſtrange, or think that it is an over-haſte, that we have ſet down particulars untried; for contrariwiſe, in our own eſtimation, we account ſuch particulars more worthy than thoſe that are already tried and known: for theſe later muſt be taken as you find them; but the other do level point-blank at the inventing of cauſes and axioms.

526. FIRST therefore you muſt make account, that if you will have one plant change into another, you muſt have the nouriſhment over-rule the ſeed; and therefore you are to practiſe it by nouriſhments as contrary as may be to the nature of the herb, ſo nevertheleſs as the herb may grow; and likewiſe with ſeeds that are of the weakeſt ſort, and have leaſt vigour. You ſhall do well therefore to take marſh-herbs, and plant them upon tops of hills and champaines; and ſuch plants as require much moiſture, upon ſandy and very dry grounds. As for example, marſh-mallows and ſedge, upon hills; cucumber, and lettuce ſeeds, and coleworts, upon a ſandy plot: ſo contrariwiſe, plant buſhes, heath, ling, and brakes, upon a wet or marſh ground. This I conceive alſo, that all eſculent and garden herbs, ſet upon the tops of hills, will prove more medicinal, though leſs eſculent, than they were before. And it may be likewiſe, ſome wild herbs you may make ſallad-herbs. This is the firſt rule for tranſmutation of plants.

527. THE ſecond rule ſhall be to bury ſome few ſeeds of the herb you would change, amongſt other ſeeds; and then you ſhall ſee, whether the juice of thoſe other ſeeds do not ſo qualify the earth, as it will alter the ſeed whereupon you work. As for example; put parſly ſeed amongſt onion ſeed, or lettuce ſeed amongſt parſly ſeed, or baſil ſeed amongſt thyme ſeed; and ſee the change of taſte or otherwiſe. But you ſhall do well to put the ſeed you would change into a little linen cloth, that it mingle not with the foreign ſeed.

528. THE third rule ſhall be, the making of ſome medley or mixture of earth, with ſome other plants bruiſed or ſhaven either in leaf or root: as for example, make earth with a mixture of colewort leaves ſtamped, and ſet in it artichoaks or parſnips; ſo take earth made with marjoram, or origanum, or wild thyme, bruiſed or ſtamped, and ſet in it fennel ſeed, *&c.* In which operation the proceſs of nature ſtill will be, (as I conceive) not that the herb you work upon ſhould draw the juice of the foreign herb, (for that opinion we have formerly rejected;) but that there will be a new confection of mould, which perhaps will alter the ſeed, and yet not to the kind of the former herb.

529. THE fourth rule ſhall be, to mark what herbs ſome earths do put forth of themſelves; and to take that earth, and to pot it, or to veſſel it; and in that to ſet the ſeed you would change: as for example, take from under walls, or the like, where nettles put forth in abundance, the earth which you ſhall there find, without any ſtring or root of the nettles; and pot that earth, and ſet in it ſtock-gilly-flowers, or wall-flowers, *&c.* or ſow in the ſeeds of them; and ſee what the event will be: or take earth that you have prepared to put forth muſhrooms of it ſelf, (whereof you ſhall find ſome inſtances following) and ſow in it purſlane ſeed, or lettuce ſeed; for in theſe experiments, it is likely enough that the earth being accuſtomed to ſend forth one kind of nouriſhment, will alter the new ſeed.

530. THE fifth rule ſhall be, to make the herb grow contrary to its nature; as to make ground-herbs riſe in height: as for example; carry camomile, or wild thyme, or the green ſtrawberry, upon ſticks, as you do hops upon poles; and ſee what the event will be.

531. THE ſixth rule ſhall be, to make plants grow out of the ſun or open air; for that is a great mutation in nature, and may induce a change in the ſeed: as barrel up earth, and ſow ſome ſeed in it, and put in the bottom of a pond; or put it in ſome great hollow tree; try alſo the ſowing of ſeeds in the bottoms of caves; and pots with ſeeds ſown, hanged up in wells ſome diſtance from the water, and ſee what the event will be.

*Experiments in conſort touching the procerity, and lowneſs, and artificial dwarfing of trees.*

532. IT is certain, that timber trees in coppice woods, grow more upright, and more free from under boughs, than thoſe that ſtand in the field: the cauſe whereof is, for that plants have a natural motion to get to the ſun; and beſides, they are not glutted with too much nouriſhment; for that the coppice ſhareth with them; and repletion ever hindereth ſtature: laſtly, they are kept warm; and that ever in plants helpeth mounting.

533. TREES that are of themſelves full of heat, (which heat appeareth by their inflammable gums) as firs and pines, mount of themſelves in height without ſide boughs, till they come towards the top. The cauſe is partly heat, and partly tenuity of juice, both which ſend the ſap upwards. As for juniper,

juniper, it is but a ſhrub, and groweth not big enough in body to maintain a tall tree.

534. IT is reported, that a good ſtrong canvas ſpread over a tree grafted low, ſoon after it putteth forth, will dwarf it, and make it ſpread. The cauſe is plain; for that all things that grow, will grow as they find room.

535. TREES are generally ſet of roots or kernels; but if you ſet them of ſlips, (as of ſome trees you may, by name the mulberry) ſome of the ſlips will take; and thoſe that take, (as is reported) will be dwarf trees. The cauſe is, for that a ſlip draweth nouriſhment more weakly than either a root or kernel.

536. ALL plants that put forth their ſap haſtily, have their bodies not proportionable to their length; and therefore they are winders and creepers; as ivy, bryony, hops, woodbine: whereas dwarfing requireth a ſlow putting forth, and leſs vigour of mounting.

*Experiments in conſort touching the rudiments of plants, and of the excreſcences of plants, or ſuper-plants.*

THE ſcripture ſaith, that *Solomon* wrote a natural hiſtory, from the cedar of *Libanus*, to the moſs growing upon the wall: for ſo the beſt tranſlations have it. And it is true that moſs is but the rudiment of a plant; and (as it were) the mould of earth or bark.

537. Moss groweth chiefly upon ridges of houſes tiled or thatched, and upon the creſts of walls: And that moſs is of a lightſome and pleaſant green. The growing upon ſlopes is cauſed, for that moſs, as on the one ſide it cometh of moiſture and water, ſo on the other ſide the water muſt but ſlide, and not ſtand or pool. And the growing upon tiles, or walls, *&c.* is cauſed, for that thoſe dried earths, having not moiſture ſufficient to put forth a plant, do practiſe germination by putting forth moſs; though when, by age, or otherwiſe, they grow to relent and reſolve, they ſometimes put forth plants, as wall-flowers. And almoſt all moſs hath here and there little ſtalks, beſides the low thrum.

538. Moss groweth upon alleys, eſpecially ſuch as lie cold, and upon the north; as in divers terraſſes: and again, if they be much trodden; or if they were at the firſt gravelled; for whereſoever plants are kept down, the earth putteth forth moſs.

539. OLD ground, that hath been long unbroken up, gathereth moſs: and therefore huſbandmen uſe to cure their paſture grounds when they grow to moſs, by tilling them for a year or two: which alſo dependeth upon the ſame cauſe; for that the more ſparing and ſtarving juice of the earth, inſufficient for plants, doth breed moſs.

540. OLD trees are more moſſy (far) than young; for that the ſap is not ſo frank as to riſe all to the boughs, but tireth by the way, and putteth out moſs.

541. FOUNTAINS have moſs growing upon the ground about them;

*Muſcoſi fontes*; ——————

The cauſe is, for that the fountains drain the water from the ground adjacent, and leave but ſufficient moiſture to breed moſs: and beſides, the coldneſs of the water conduceth to the ſame.

542. THE moſs of trees is a kind of hair; for it is the juice of the tree that is excerned, and doth not aſſimilate. And upon great trees the moſs gathereth a figure like a leaf.

543. THE moiſter ſort of trees yield little moſs; as we ſee in aſps, poplars, willows, beeches, *&c.* which is partly cauſed for the reaſon that hath been given; of the frank putting up of the ſap into the boughs; and partly, for that the barks of thoſe trees are more cloſe and ſoft, than thoſe of oaks and aſhes; whereby the moſs can the hardlier iſſue out.

544. IN clay-grounds all fruit-trees grow full of moſs, both upon body and boughs; which is cauſed partly by the coldneſs of the ground, whereby the plants nouriſh leſs; and partly by the toughneſs of the earth, whereby the ſap is ſhut in, and cannot get up to ſpread ſo frankly as it ſhould do.

545. We have ſaid heretofore, that if trees be hidebound, they wax leſs fruitful, and gather moſs; and that they are holpen by hacking, *&c.* And therefore by the reaſon of contraries, if trees be bound in with cords, or ſome outward bands, they will put forth more moſs: which (I think) happeneth to trees that ſtand bleak, and upon the cold winds. It would alſo be tried, whether if you cover a tree ſomewhat thick upon the top after his polling, it will not gather more moſs. I think alſo the watering of trees with cold fountain water, will make them grow full of moſs.

546. THERE is a moſs the perfumers have, which cometh out of apple trees, that hath an excellent ſcent. *Quære* particularly for the manner of the growth, and the nature of it. And for this experiment's ſake, being a thing of price, I have ſet down the laſt experiment how to multiply and call on moſſes.

NEXT unto moſs, I will ſpeak of muſhrooms; which are likewiſe an imperfect plant. The muſhrooms have two ſtrange properties; the one, that they yield ſo delicious a meat; the other, that they come up ſo haſtily, as in a night; and yet they are unſown. And therefore ſuch as are upſtarts in ſtate, they call in reproach muſhrooms. It muſt needs be therefore, that they be made of much moiſture; and that moiſture fat, groſs, and yet ſomewhat concocted. And (indeed) we find, that muſhrooms cauſe the accident which we call *incubus*, or the mare in the ſtomach. And therefore the ſurfeit of them may ſuffocate and empoiſon. And this ſheweth, that they are windy; and that windineſs is groſs and ſwelling, not ſharp or grinding. And upon the ſame reaſon muſhrooms are a venereous meat.

547. IT is reported, that the bark of white or red poplar, (which are of the moiſteſt of trees) cut ſmall, and caſt into furrows well dunged, will cauſe the ground to put forth muſhrooms at all ſeaſons of the year fit to be eaten. Some add to the mixture leaven of bread reſolved in water.

548. IT is reported, that if a hilly field where the ſtubble is ſtanding, be ſet on fire in the ſhowry ſeaſon, it will put forth great ſtore of muſhrooms.

549. IT is reported, that hartſhorn, ſhaven, or in ſmall pieces, mixed with dung and watered, putteth up muſhrooms. And we know that hartshorn is of a fat and clammy ſubſtance: and it may be ox-horn would do the like.

550. IT hath been reported, though it be ſcarce credible, that ivy hath grown out of a ſtag's horn; which they ſuppoſe did rather come from a confrication of the horn upon the ivy, than from the horn it ſelf. There is not known any ſubſtance but earth, and the proceedures of earth, (as tile, ſtone, *&c.*) that yieldeth any moſs or herby ſubſtance. There may be trial made of ſome ſeeds, as that fennel-ſeed, muſtard-ſeed, and rape-ſeed, put into ſome little holes, made in the horns of ſtags, or oxen, to ſee if they will grow.

551. THERE is alſo another imperfect plant, that (in ſhew) is like a great muſhroom:

muſhroom: and it is ſometimes as broad as one's hat; which they call a toad's-ſtool: but it is not eſculent; and it groweth (commonly) by a dead ſtub of a tree; and likewiſe about the roots of rotten trees: and therefore ſeemeth to take his juice from wood putrefied. Which ſheweth, by the way, that wood putrefied yieldeth a frank moiſture.

552. THERE is a cake that groweth upon the ſide of a dead tree, that hath gotten no name, but it is large and of a cheſtnut colour, and hard and pithy; whereby it ſhould ſeem, that even dead trees forget not their putting forth; no more than the carcaſes of mens bodies, that put forth hair and nails for a time.

553. THERE is a cod, or bag, that groweth commonly in the fields; that at the firſt is hard like a tennis-ball, and white; and after groweth of a muſh-room colour, and full of light duſt upon the breaking: and is thought to be dangerous for the eyes if the powder get into them; and to be good for kibes. Belike it hath a corroſive and fretting nature.

554. THERE is an herb called *Jews* ear, that groweth upon the roots and lower parts of the bodies of trees; eſpecially of elders, and ſometimes aſhes. It hath a ſtrange property; for in warm water it ſwelleth, and openeth extremely. It is not green, but of a duſky brown colour. And it is uſed for ſquinancies and inflammations in the throat; whereby it ſeemeth to have a mollifying and lenifying virtue.

555. THERE is a kind of ſpongy excreſcence, which groweth chiefly upon the roots of the laſer tree; and ſometimes upon cedar and other trees. It is very white, and light, and friable; which we call agarick. It is famous in phyſick for the purging of tough phlegm. And it is alſo an excellent opener for the liver; but offenſive to the ſtomach: and in taſte, it is at the firſt ſweet, and after bitter.

556. WE find no ſuper-plant that is a formed plant, but miſſeltoe. They have an idle tradition, that there is a bird called a miſſel bird, that feedeth upon a ſeed, which many times ſhe cannot digeſt, and ſo expelleth it whole with her excrement: which falling upon a bough of a tree that hath ſome rift, putteth forth the miſſeltoe. But this is a fable; for it is not probable, that birds ſhould feed upon that they cannot digeſt. But allow that, yet it cannot be for other reaſons: for firſt, it is found but upon certain trees; and thoſe trees bear no ſuch fruit, as may allure that bird to ſit and feed upon them. It may be, that bird feedeth upon the miſſeltoe-berries, and ſo is often found there; which may have given occaſion to the tale. But that which maketh an end of the queſtion is, that miſſeltoe hath been found to put forth under the boughs, and not (only) above the boughs; ſo it cannot be any thing that falleth upon the bough. Miſſeltoe groweth chiefly upon crab-trees, apple-trees, ſometimes upon hazles, and rarely upon oaks; the miſſeltoe whereof is counted very medicinal. It is ever green winter and ſummer; and beareth a white gliſtering berry: and it is a plant utterly differing from the plant upon which it groweth. Two things therefore may be certainly ſet down: firſt, that ſuper-fetation muſt be by abundance of ſap in the bough that putteth it forth: ſecondly, that that ſap muſt be ſuch as the tree doth excern, and cannot aſſimilate; for elſe it would go into a bough; and beſides, it ſeemeth to be more fat and unctuous than the ordinary ſap of the tree; both by the berry which is clammy; and by that it continueth green winter and ſummer, which the tree doth not.

557. THIS experiment of miſſeltoe may give light to other practices. Therefore trial would be made by ripping of the bough of a crab-tree in

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the bark; and watering of the wound every day with warm water dunged, to ſee if it would bring forth miſſeltoe, or any ſuch like thing. But it were yet more likely to try it with ſome other watering or anointing, that were not ſo natural to the tree as water is; as oil, or barm of drink, *&c.* ſo they be ſuch things as kill not the bough.

558. It were good to try, what plants would put forth, if they be forbidden to put forth their natural boughs: poll therefore a tree, and cover it ſome thickneſs with clay on the top, and ſee what it will put forth. I ſuppoſe it will put forth roots; for ſo will a cion, being turned down into clay: therefore, in this experiment alſo, the tree would be cloſed with ſomewhat that is not ſo natural to the plant as clay is. Try it with leather, or cloth, or painting, ſo it be not hurtful to the tree. And it is certain, that a brake hath been known to grow out of a pollard.

559. A man may count the prickles of trees to be a kind of excreſcence; for they will never be boughs, nor bear leaves. The plants that have prickles are thorns, black and white; brier, roſe, lemon-trees, crab-trees, gooſberry, berberry; theſe have it in the bough; the plants that have prickles in the leaf are, holly, juniper, whin-buſh, thiſtle; nettles alſo have a ſmall venomous prickle; ſo hath borage, but harmleſs. The cauſe muſt be haſty putting forth, want of moiſture, and the cloſeneſs of the bark; for the haſte of the ſpirit to put forth, and the want of nouriſhment to put forth a bough, and the cloſeneſs of the bark, cauſe prickles in boughs; and therefore they are ever like a *pyramis*, for that the moiſture ſpendeth after a little putting forth. And for prickles in leaves, they come alſo of putting forth more juice into the leaf than can ſpread in the leaf ſmooth, and therefore the leaves otherwiſe are rough, as borage and nettles are. As for the leaves of holly, they are ſmooth, but never plain, but as it were with folds for the ſame cauſe.

560. There be alſo plants, that though they have no prickles, yet they have a kind of downy or velvet rind upon their leaves; as roſe-campion, ſtock-gilly-flowers, colts-foot, which down or nap cometh of a ſubtil ſpirit, in a ſoft or fat ſubſtance. For it is certain, that both ſtock-gilly-flowers and roſe-campions, ſtamped, have been applied (with ſucceſs) to the wriſts of thoſe that have had tertian or quartan agues; and the vapour of colts-foot hath a ſanative virtue towards the lungs; and the leaf alſo is healing in ſurgery.

561. Another kind of excreſcence is an exudation of plants joined with putrefaction; as we ſee in oak-apples, which are found chiefly upon the leaves of oaks, and the like upon willows: and country people have a kind of prediction, that if the oak-apple broken be full of worms, it is a ſign of a peſtilent year; which is a likely thing, becauſe they grow of corruption.

562. There is alſo upon ſweet, or other brier, a fine tuft or bruſh of moſs of divers colours; which if you cut, you ſhall ever find full of little white worms.

*Experiments in conſort touching the producing of perfect plants without ſeed.*

563. It is certain, that earth taken out of the foundations of vaults and houſes, and bottoms of wells, and then put into pots, will put forth ſundry kinds of herbs: but ſome time is required for the germination; for if it be taken but from a fathom deep, it will put forth the firſt year; if much deeper, not till after a year or two.

564. The nature of the plants growing out of earth ſo taken up, doth follow the nature of the mould it ſelf; as if the mould be ſoft and fine, it

putteth forth ſoft herbs; as graſs, plantain, and the like; if the earth be harder and coarſer, it putteth forth herbs more rough, as thiſtles, firs, *&c.*

565. IT is common experience, that where alleys are cloſe gravelled, the earth putteth forth the firſt year knot graſs, and after ſpire graſs. The cauſe is, for that the hard gravel or pebble at the firſt laying will not ſuffer the graſs to come forth upright, but turneth it to find his way where it can; but after that the earth is ſomewhat looſened at the top, the ordinary graſs cometh up.

566. IT is reported, that earth being taken out of ſhady and watery woods ſome depth, and potted, will put forth herbs of a fat and juicy ſubſtance; as penny-worth, purſlane, houſleek, penny-royal, *&c.*

567. THE water alſo doth ſend forth plants that have no roots fixed in the bottom; but they are leſs perfect plants, being almoſt but leaves, and thoſe ſmall ones; ſuch is that we call duck-weed, which hath a leaf no bigger than a thyme leaf, but of a freſher green, and putteth forth a little ſtring into the water far from the bottom. As for the water lily, it hath a root in the ground; and ſo have a number of other herbs that grow in ponds.

568. IT is reported by ſome of the ancients, and ſome modern teſtimony likewiſe, that there be ſome plants that grow upon the top of the ſea, being ſuppoſed to grow of ſome concretion of ſlime from the water, where the ſun beateth hot, and where the ſea ſtirreth little. As for *alga marina*, (ſea weed) and *eryngium* (ſea thiſtle) both have roots; but the ſea weed under the water, the ſea thiſtle but upon the ſhore.

569. THE ancients have noted, that there are ſome herbs that grow out of ſnow laid up cloſe together and putrefied, and that they are all bitter; and they name one eſpecially *ſtomus*, which we call moth-mullein. It is certain, that worms are found in ſnow commonly, like earth-worms; and therefore it is not unlike, that it may likewiſe put forth plants.

570. THE ancients have affirmed, that there are ſome herbs that grow out of ſtone; which may be, for that it is certain that toads have been found in the middle of a free-ſtone. We ſee alſo that flints, lying above ground, gather moſs; and wall-flowers, and ſome other flowers, grow upon walls; but whether upon the main brick or ſtone, or whether out of the lime or chinks, is not well obſerved: for elders and aſhes have been ſeen to grow out of ſteeples; but they manifeſtly grow out of clefts; in ſo much as when they grow big, they will diſjoin the ſtone. And beſides, it is doubtful whether the mortar it ſelf putteth it forth, or whether ſome ſeeds be not let fall by birds. There be likewiſe rock-herbs; but I ſuppoſe thoſe are where there is ſome mould or earth. It hath likewiſe been found, that great trees growing upon quarries, have put down their root into the ſtone.

571. IN ſome mines in *Germany*, as is reported, there grow in the bottom vegetables; and the work-folks uſe to ſay they have magical virtue, and will not ſuffer men to gather them.

572. THE ſea ſands ſeldom bear plants. Whereof the cauſe is yielded by ſome of the ancients, for that the ſun exhaleth the moiſture before it can incorporate with the earth, and yield a nouriſhment for the plant. And it is affirmed alſo, that ſand hath (always) its root in clay; and that there be no veins of ſand any great depth within the earth.

573. IT is certain, that ſome plants put forth for a time of their own ſtore, without any nouriſhment from earth, water, ſtone, *&c.* of which *vide* the experiment 29.

*Experiments in conſort touching foreign plants.*

574. IT is reported, that earth that was brought out of the *Indies*, and other remote countries for ballaſt of ſhips, caſt upon ſome grounds in *Italy*, did put forth foreign herbs, to us in *Europe* not known; and that which is more, that of their roots, barks, and ſeeds, contuſed together, and mingled with other earth, and well water'd with warm water, there came forth herbs much like the other.

575. PLANTS brought out of hot countries, will endeavour to put forth at the ſame time that they uſually do in their own climate; and therefore to preſerve them, there is no more required, than to keep them from the injury of putting back by cold. It is reported alſo, that grain out of the hotter countries tranſlated into the colder, will be more forward than the ordinary grain of the cold country. It is likely that this will prove better in grains than in trees, for that grains are but annual, and ſo the virtue of the ſeed is not worn out; whereas in a tree, it is embaſed by the ground to which it is removed.

576. MANY plants which grow in the hotter countries, being ſet in the colder, will nevertheleſs, even in thoſe cold countries, being ſown of ſeeds late in the ſpring, come up and abide moſt part of the ſummer; as we find it in orange and lemon ſeeds, *&c.* the ſeeds whereof ſown in the end of *April* will bring forth excellent ſallads, mingled with other herbs. And I doubt not, but the ſeeds of clove trees, and pepper ſeeds, *&c.* if they could come hither green enough to be ſown, would do the like.

*Experiments in conſort touching the ſeaſons in which plants come forth.*

577. THERE be ſome flowers, bloſſoms, grains, and fruits, which come more early, and others which come more late in the year. The flowers that come early with us are primroſes, violets, anemonies, water-diffadillies, *crocus vernus*, and ſome early tulips. And they are all cold plants; which therefore (as it ſhould ſeem) have a quicker perception of the heat of the ſun increaſing than the hot herbs have; as a cold hand will ſooner find a little warmth than an hot. And thoſe that come next after, are wall flowers, cowſlips, hyacinths, roſemary flowers, *&c.* and after them, pinks, roſes, flowerdeluces, *&c.* and the lateſt are gilly-flowers, holyoaks, larksfoot, *&c.* The earlieſt bloſſoms are, the bloſſoms of peaches, almonds, cornelians, mezerions, *&c.* and they are of ſuch trees as have much moiſture, either watery or oily. And therefore *crocus vernus* alſo, being an herb, that hath an oily juice, putteth forth early; for thoſe alſo find the ſun ſooner than the drier trees. The grains are, firſt rye and wheat; then oats and barley; then peaſe and beans. For though green peaſe and beans be eaten ſooner, yet the dry ones that are uſed for horſe meat, are ripe laſt; and it ſeemeth that the fatter grain cometh firſt. The earlieſt fruits are ſtrawberries, cherries, gooſberries, currans; and after them early apples, early pears, apricots, raſps; and after them, damaſcenes, and moſt kind of plumbs, peaches, *&c.* and the lateſt are apples, wardens, grapes, nuts, quinces, almonds, ſloes, briar-berries, hips, medlars, ſervices, cornelians, *&c.*

578. IT is to be noted, that (commonly) trees that ripen lateſt, bloſſom ſooneſt; as peaches, cornelians, ſloes, almonds, *&c.* and it ſeemeth to be a work of providence that they bloſſom ſo ſoon; for otherwiſe they could not have the ſun long enough to ripen.

579. THERE be fruits (but rarely) that come twice in a year; as ſome pears,

pears, ſtrawberries, *&c.* And it ſeemeth they are ſuch as abound with nouriſhment; whereby after one period, before the ſun waxeth too weak, they can endure another. The violet alſo, amongſt flowers, cometh twice a year, eſpecially the double white; and that alſo is a plant full of moiſture. Roſes come twice, but it is not without cutting, as hath been formerly ſaid.

580. In *Muſcovy* though the corn come not up till late ſpring, yet their harveſt is as early as ours. The cauſe is, for that the ſtrength of the ground is kept in with the ſnow; and we ſee with us, that if it be a long winter, it is commonly a more plentiful year: and after thoſe kind of winters likewiſe, the flowers and corn, which are earlier and later, do come commonly at once, and at the ſame time; which troubleth the huſbandman many times; for you ſhall have red roſes and damaſk roſes come together; and likewiſe the harveſt of wheat and barley. But this happeneth ever, for that the earlier ſtayeth for the later; and not that the later cometh ſooner.

581. THERE be divers fruit-trees in the hot countries, which have bloſſoms, and young fruit, and ripe fruit, almoſt all the year ſucceeding one another. And it is ſaid the orange hath the like with us, for a great part of ſummer; and ſo alſo hath the fig. And no doubt the natural motion of plants is to have ſo; but that either they want juice to ſpend; or they meet with the cold of the winter: and therefore this circle of ripening cannot be but in ſucculent plants, and hot countries.

582. SOME herbs are but annual, and die, root and all, once a year; as borage, lettuce, cucumbers, muſk-melons, baſil, tobacco, muſtard-ſeed, and all kinds of corn; ſome continue many years; as hyſſop, germander, lavender, fennel, *&c.* The cauſe of the dying is double; the firſt is, the tenderneſs and weakneſs of the ſeed, which maketh the period in a ſmall time; as it is in borage, lettuce, cucumbers, corn, *&c.* and therefore none of theſe are hot. The other cauſe is, for that ſome herbs can worſe endure cold; as baſil, tobacco, muſtard-ſeed. And theſe have (all) much heat.

*Experiments in conſort touching the laſting of herbs and trees.*

583. THE laſting of plants is moſt in thoſe that are largeſt of body; as oak, elm, cheſtnut, the loat-tree, *&c.* and this holdeth in trees; but in herbs it is often contrary: for borage, colewort, pompions, which are herbs of the largeſt ſize, are of ſmall durance; whereas hyſſop, winter-ſavoury, germander, thyme, ſage, will laſt long. The cauſe is, for that trees laſt according to the ſtrength and quantity of their ſap and juice; being well munited by their bark againſt the injuries of the air: but herbs draw a weak juice, and have a ſoft ſtalk; and therefore thoſe amongſt them which laſt longeſt, are herbs of ſtrong ſmell, and with a ſticky ſtalk.

584. TREES that bear maſt, and nuts, are commonly more laſting than thoſe that bear fruits; eſpecially the moiſter fruits: as oaks, beeches, cheſtnuts, walnuts, almonds, pine trees, *&c.* laſt longer than apples, pears, plumbs, *&c.* The cauſe is the fatneſs and oilineſs of the ſap; which ever waſteth leſs than the more watery.

585. TREES that bring forth their leaves late in the year, and caſt them likewiſe late, are more laſting than thoſe that ſprout their leaves early, or ſhed them betimes. The cauſe is, for that the late coming forth ſheweth a moiſture more fixed; and the other more looſe, and more eaſily reſolved. And the ſame cauſe is, that wild trees laſt longer than garden trees; and in the ſame kind, thoſe whoſe fruit is acid, more than thoſe whoſe fruit is ſweet.

586. Nothing procureth the laſting of trees, buſhes and herbs, ſo much as often cutting: for every cutting cauſeth a renovation of the juice of the plant; that it neither goeth ſo far, nor riſeth ſo faintly, as when the plant is not cut: in ſo much as annual plants, if you cut them ſeaſonably, and will ſpare the uſe of them, and ſuffer them to come up ſtill young, will laſt more years than one, as hath been partly touched; ſuch as is lettuce, purſlane, cucumber, and the like. And for great trees, we ſee almoſt all overgrown trees in church-yards, or near ancient buildings, and the like, are pollards, or dottards, and not trees at their full height.

587. Some experiment would be made, how by art to make plants more laſting than their ordinary period; as to make a ſtalk of wheat, *&c.* laſt a whole year. You muſt ever preſuppoſe, that you handle it ſo as the winter killeth it not; for we ſpeak only of prolonging the natural period. I conceive that the rule will hold, that whatſoever maketh the herb come later than at its time, will make it laſt longer time: it were good to try it in a ſtalk of wheat, *&c.* ſet in the ſhade, and encompaſſed with a caſe of wood, not touching the ſtraw, to keep out open air.

As for the preſervation of fruits and plants, as well upon the tree or ſtalk, as gathered, we ſhall handle it under the title of conſervation of bodies.

*Experiments in conſort touching the ſeveral figures of plants.*

588. The particular figures of plants we leave to their deſcriptions; but ſome few things in general we will obſerve. Trees and herbs, in the growing forth of their boughs and branches, are not figured, and keep no order. The cauſe is, for that the ſap being reſtrained in the rind and bark, breaketh not forth at all; as in the bodies of trees, and ſtalks of herbs, till they begin to branch; and then when they make an eruption, they break forth caſually, where they find beſt way in the bark or rind. It is true, that ſome trees are more ſcattered in their boughs; as ſallow trees, warden trees, quince trees, medlar trees, lemon trees, *&c.* Some are more in the form of a *pyramis*, and come almoſt to todd; as the pear-tree, (which the criticks will have to borrow his name of πῦρ, fire,) orange trees, fir trees, ſervice trees, lime trees, *&c.* and ſome are more ſpread and broad; as beeches, hornbeam, *&c.* the reſt are more indifferent. The cauſe of ſcattering the boughs, is the haſty breaking forth of the ſap; and therefore thoſe trees riſe not in a body of any height, but branch near the ground. The cauſe of the *pyramis* is the keeping in of the ſap, long before it branch; and the ſpending of it when it beginneth to branch by equal degrees. The ſpreading is cauſed by the carrying up of the ſap plentifully, without expence; and then putting it forth ſpeedily and at once.

589. There be divers herbs, but no trees, that may be ſaid to have ſome kind of order in the putting forth of their leaves: for they have joints or knuckles, as it were ſtops in their germination; as have gilly-flowers, pinks, fennel, corn, reeds, and canes. The cauſe whereof is, for that the ſap aſcendeth unequally, and doth (as it were) tire and ſtop by the way. And it ſeemeth they have ſome cloſeneſs and hardneſs in their ſtalk, which hindreth the ſap from going up, until it hath gathered into a knot, and ſo is more urged to put forth. And therefore they are moſt of them hollow when the ſtalk is dry; as fennel-ſtalk, ſtubble, and canes.

590. Flowers have (all) exquiſite figures; and the flower numbers are (chiefly) five, and four; as in primroſes, briar roſes, ſingle muſk roſes, ſingle pinks, and gilly-flowers, *&c.* which have five leaves: lilies, flowerdeluces, borage,

borage, bugloſs, &c. which have four leaves. But ſome put forth leaves not numbred; but they are ever ſmall ones; as marygolds, trefoils, &c. We ſee alſo, that the ſockets and ſupporters of flowers are figured; as in the five brethren of the roſe; ſockets of gilly-flowers, &c. Leaves alſo are all figured; ſome round; ſome long; ſome ſquare; and many jagged on the ſides; which leaves of flowers ſeldom are. For I account the jagging of pinks and gilly-flowers, to be like the inequality of oak leaves, or vine leaves, or the like; but they ſeldom or never have any ſmall purls.

*Experiments in conſort touching ſome principal differences in plants.*

591. OF plants, ſome few put forth their bloſſoms before their leaves; as almonds, peaches, cornelians, black thorn, &c. but moſt put forth ſome leaves before their bloſſoms; as apples, pears, plumbs, cherries, white thorn, &c. The cauſe is, for that thoſe that put forth their bloſſoms firſt, have either an acute and ſharp ſpirit; (and therefore commonly they all put forth early in the ſpring, and ripen very late; as moſt of the particulars before mentioned;) or elſe an oily juice, which is apter to put out flowers than leaves.

592. OF plants, ſome are green all winter; others caſt their leaves. There are green all winter, holly, ivy, box, fir, yew, cypreſs, juniper, bays, roſemary, &c. The cauſe of the holding green, is the cloſe and compact ſubſtance of their leaves, and the pedicles of them. And the cauſe of that again is either the tough and viſcous juice of the plant; or the ſtrength and heat thereof. Of the firſt ſort is holly; which is of ſo viſcous a juice, as they make birdlime of the bark of it. The ſtalk of ivy is tough, and not fragile, as we ſee in other ſmall twigs dry. Fir yieldeth pitch. Box is a faſt and heavy wood, as we ſee it in bowls. Yew is a ſtrong and tough wood, as we ſee it in bows. Of the ſecond ſort is juniper, which is a wood odorate; and maketh a hot fire. Bays is likewiſe a hot and aromatical wood; and ſo is roſemary for a ſhrub. As for the leaves, their denſity appeareth, in that either they are ſmooth and ſhining, as in bays, holly, ivy, box, &c. or in that they are hard and ſpiry, as in the reſt. And trial would be made of grafting of roſemary, and bays, and box, upon a holly-ſtock; becauſe they are plants that come all winter. It were good to try it alſo with grafts of other trees, either fruit trees, or wild trees; to ſee whether they will not yield their fruit, or bear their leaves later and longer in the winter; becauſe the ſap of the holly putteth forth moſt in the winter. It may be alſo a mezerion tree, grafted upon a holly, will prove both an earlier and a greater tree.

593. THERE be ſome plants that bear no flower, and yet bear fruit: there be ſome that bear flowers and no fruit: there be ſome that bear neither flowers nor fruit. Moſt of the great timber trees, (as oaks, beeches, &c.) bear no apparent flowers; ſome few (likewiſe) of the fruit trees; as mulberry, walnut, &c. and ſome ſhrubs, (as juniper, holly, &c.) bear no flowers. Divers herbs alſo bear ſeeds, (which is as the fruit) and yet bear no flowers; as purſlane, &c. Thoſe that bear flowers and no fruit are few; as the double cherry, the ſallow, &c. But for the cherry, it is doubtful whether it be not by art or culture; for if it be by art, then trial would be made, whether apples, and other fruits bloſſoms, may not be doubled. There are ſome few that bear neither fruit nor flower; as the elm, the poplars, box, brakes, &c.

594. THERE be ſome plants that ſhoot ſtill upwards, and can ſupport themſelves;

themſelves; as the greateſt part of trees and plants: there be ſome other that creep along the ground; or wind about other trees or props; and cannot ſupport themſelves; as vines, ivy, briar, bryony, woodbines, hops, climatis, camomile, *&c.* The cauſe is (as hath been partly touched) for that all plants (naturally) move upwards; but if the ſap put up too faſt, it maketh a ſlender ſtalk, which will not ſupport the weight: and therefore theſe latter ſort are all ſwift and haſty comers.

*Experiments in conſort touching all manner of compoſts, and helps of ground.*

595. THE firſt and moſt ordinary help is ſtercoration. The ſheeps dung is one of the beſt; and next the dung of kine: and thirdly, that of horſes: which is held to be ſomewhat too hot unleſs it be mingled. That of pigeons for a garden, as a ſmall quantity of ground, excelleth. The ordering of dung is, if the ground be arable, to ſpread it immediately before the ploughing and ſowing; and ſo to plough it in: for if you ſpread it long before, the ſun will draw out much of the fatneſs of the dung: if the ground be grazing ground, to ſpread it ſomewhat late towards winter; that the ſun may have the leſs power to dry it up. As for ſpecial compoſts for gardens, (as a hot bed, *&c.*) we have handled them before.

596. THE ſecond kind of compoſt is, the ſpreading of divers kinds of earth; as marle, chalk, ſea ſand, earth upon earth, pond earth; and the mixtures of them. Marle is thought to be the beſt, as having moſt fatneſs; and not heating the ground too much. The next is ſea ſand, which (no doubt) obtaineth a ſpecial virtue by the ſalt: for ſalt is the firſt rudiment of life. Chalk over-heateth the ground a little; and therefore is beſt upon cold clay grounds, or moiſt grounds: but I heard a great huſband ſay, that it was a common error, to think that chalk helpeth arable grounds, but helpeth not grazing grounds; whereas (indeed) it helpeth graſs as well as corn: but that which breedeth the error is, becauſe after the chalking of the ground, they wear it out with many crops without reſt; and then (indeed) afterwards it will bear little graſs, becauſe the ground is tired out. It were good to try the laying of chalk upon arable grounds a little while before ploughing; and to plough it in as they do the dung; but then it muſt be friable firſt by rain or lying: as for earth, it compaſſeth it ſelf; for I knew a great garden, that had a field (in a manner) poured upon it; and it did bear fruit excellently the firſt year of the planting: for the ſurface of the earth is ever the fruitfulleſt. And earth ſo prepared hath a double ſurface. But it is true, as I conceive, that ſuch earth as hath ſalt-petre bred in it, if you can procure it without too much charge, doth excel. The way to haſten the breeding of ſalt-petre, is to forbid the ſun, and the growth of vegetables. And therefore if you make a large hovel, thatched, over ſome quantity of ground; nay, if you do but plank the ground over, it will breed ſalt-petre. As for pond earth, or river earth, it is a very good compoſt; eſpecially if the pond have been long uncleanſed, and ſo the water be not too hungry: and I judge it will be yet better if there be ſome mixture of chalk.

597. THE third help of ground is, by ſome other ſubſtances that have a virtue to make ground fertile, though they be not merely earth: wherein aſhes excel; inſomuch as the countries about *Aetna* and *Veſuvius* have a kind of amends made them, for the miſchief the eruptions (many times) do, by the exceeding fruitfulneſs of the ſoil, cauſed by the aſhes ſcattered about. Soot alſo, though thin ſpread in a field or garden, is tried to be a very good compoſt. For ſalt, it is too coſtly; but it is tried, that mingled with ſeed-corn,

corn, and ſown together, it doth good: and I am of opinion, that chalk in powder, mingled with ſeed corn, would do good; perhaps as much as chalking the ground all over. As for the ſteeping of the ſeeds in ſeveral mixtures with water to give them vigour; or watering grounds with compoſt water, we have ſpoken of them before.

598. THE fourth help of ground, is the ſuffering of vegetables to die into the ground, and ſo to fatten it; as the ſtubble of corn, eſpecially peaſe. Brakes caſt upon the ground in the beginning of winter, will make it very fruitful. It were good (alſo) to try whether leaves of trees ſwept together, with ſome chalk and dung mixed, to give them more heart, would not make a good compoſt; for there is nothing loſt, ſo much as leaves of trees; and as they lie ſcattered, and without mixture, they rather make the ground ſour than otherwiſe.

599. THE fifth help of ground, is heat and warmth. It hath been anciently practiſed to burn heath, and ling, and ſedge, with the vantage of the wind, upon the ground. We ſee that warmth, of walls and encloſures, mendeth ground: we ſee alſo, that lying open to the ſouth, mendeth ground: we ſee again, that the foldings of ſheep help ground, as well by their warmth, as by their compoſt: and it may be doubted, whether the covering of the ground with brakes in the beginning of the winter (whereof we ſpake in the laſt experiment) helpeth it not, by reaſon of the warmth. Nay, ſome very good huſbands do ſuſpect, that the gathering up of flints in flinty ground, and laying them on heaps, (which is much uſed,) is no good huſbandry, for that they would keep the ground warm.

600. THE ſixth help of ground is by watering, and irrigation; which is in two manners; the one by letting in and ſhutting out waters at ſeaſonable times: for water, at ſome ſeaſons, and with reaſonable ſtay, doth good; but at ſome other ſeaſons, and with too long ſtay, doth hurt: and this ſerveth only for meadows which are along ſome river. The other way is, to bring water from ſome hanging grounds where there are ſprings into the lower grounds, carrying it in ſome long furrows; and from thoſe furrows, drawing it traverſe to ſpread the water. And this maketh an excellent improvement, both for corn and graſs. It is the richer, if thoſe hanging grounds be fruitful, becauſe it waſheth off ſome of the fatneſs of the earth; but howſoever it profiteth much. Generally, where there are great overflows in fens, or the like, the drowning of them in the winter maketh the ſummer following more fruitful: the cauſe may be, for that it keepeth the ground warm and nouriſheth it. But the fen-men hold, that the ſewers muſt be kept ſo, as the water may not ſtay too long in the ſpring till the weeds and ſedge be grown up; for then the ground will be like a wood, which keepeth out the ſun, and ſo continueth the wet; whereby it will never graze (to purpoſe) that year. Thus much for irrigation. But for avoidances, and drainings of water, where there is too much, and the helps of ground in that kind, we ſhall ſpeak of them in another place.

NATU-

# NATURAL HISTORY.

## CENT. VII.

*Experiment in conſort touching the affinities and differences between plants and inanimate bodies.*

601. THE differences between animate and inanimate bodies, we ſhall handle fully under the title of life, and living ſpirits, and powers. We ſhall therefore make but a brief mention of them in this place. The main differences are two. All bodies have ſpirits, and pneumatical parts within them; but the main differences between animate and inanimate, are two: The firſt is, that the ſpirits of things animate are all continued within themſelves, and are branched in veins, and ſecret canals, as blood is; and in living creatures, the ſpirits have not only branches, but certain cells or ſeats, where the principal ſpirits do reſide, and whereunto the reſt do reſort: but the ſpirits in things inanimate are ſhut in, and cut off by the tangible parts, and are not pervious one to another, as air is in ſnow. The ſecond main difference is, that the ſpirits of animate bodies are all in ſome degree (more or leſs) kindled and inflamed; and have a fine commixture of flame, and an aërial ſubſtance. But inanimate bodies have their ſpirits no whit inflamed, or kindled. And this difference conſiſteth not in the heat or coolneſs of ſpirits; for cloves and other ſpices, *naptha* and *petroleum*, have exceeding hot ſpirits, (hotter a great deal than oil, wax, or tallow, *&c.*) but not inflamed. And when any of thoſe weak and temperate bodies come to be inflamed, then they gather a much greater heat than others have un-inflamed, beſides their light and motion, *&c.*

602. THE differences, which are ſecondary, and proceed from theſe two radical differences, are, firſt, plants are all figurate and determinate, which inanimate bodies are not; for look how far the ſpirit is able to ſpread and continue it ſelf; ſo far goeth the ſhape or figure, and then is determined. Secondly, plants do nouriſh; inanimate bodies do not: they have an accretion, but no alimentation. Thirdly, plants have a period of life, which inanimate bodies have not. Fourthly, they have a ſucceſſion and propagation of their kind, which is not in bodies inanimate.

603. THE differences between plants, and metals or foſſils, beſides thoſe four before-mention'd, (for metals I hold inanimate,) are theſe: firſt, metals are more durable than plants: ſecondly, they are more ſolid and hard: thirdly, they are wholly ſubterrany; whereas plants are part above earth, and part under the earth.



604. THERE

604. THERE be very few creatures that participate of the nature of plants and metals both; coral is one of the neareſt of both kinds: another is vitriol, for that is apteſt to ſprout with moiſture.

605. ANOTHER ſpecial affinity is between plants and mould, or putrefaction: for all putrefaction (if it diſſolve not in arefaction) will in the end iſſue into plants, or living creatures bred of putrefaction. I account moſs, and muſhrooms, and agarick, and other of thoſe kinds, to be but moulds of the ground, walls, and trees, and the like. As for fleſh, and fiſh, and plants themſelves, and a number of other things, after a mouldineſs, or rottenneſs, or corrupting, they will fall to breed worms. Theſe putrefactions, which have affinity with plants, have this difference from them; that they have no ſucceſſion or propagation, though they nouriſh, and have a period of life, and have likewiſe ſome figure.

606. I left once by chance a citron cut in a cloſe room for three ſummer months that I was abſent, and at my return there were grown forth out of the pith cut tufts of hairs an inch long, with little black heads, as if they would have been ſome herb.

*Experiments in conſort touching the affinities and differences of plants and living creatures, and the conſiners and participles of them.*

607. THE affinities and differences between plants and living creatures are theſe that follow. They have both of them ſpirits continued, and branched, and alſo inflamed. But firſt in living creatures, the ſpirits have a cell or ſeat; which plants have not; as was alſo formerly ſaid. And ſecondly, the ſpirits of living creatures hold more of flame than the ſpirits of plants do. And theſe two are the radical differences. For the ſecondary differences, they are as follow. Firſt, plants are all fixed to the earth, whereas all living creatures are ſever'd, and of themſelves. Secondly, living creatures have local motion, plants have not. Thirdly, living creatures nouriſh from their upper parts, by the mouth chiefly; plants nouriſh from below, namely from the roots. Fourthly, plants have their ſeed and ſeminal parts uppermoſt; living creatures have them lowermoſt: and therefore it was ſaid, not elegantly alone, but philoſophically; *Homo eſt planta inverſa*; Man is like a plant turned upwards: for the root in plants is as the head in living creatures. Fifthly, living creatures have a more exact figure than plants. Sixthly, living creatures have more diverſity of organs within their bodies, and (as it were) inward figures, than plants have. Seventhly, living creatures have ſenſe, which plants have not. Eighthly, living creatures have voluntary motion, which plants have not.

608. FOR the difference of ſexes in plants, they are oftentimes by name diſtinguiſhed; as male-piony, female-piony; male-roſemary, female-roſemary; he-holly, ſhe-holly, *&c.* but generation by copulation (certainly) extendeth not to plants. The neareſt approach of it is between the he-palm and the ſhe-palm, which (as they report) if they grow near, incline the one to the other; inſomuch as (that which is more ſtrange) they doubt not to report, that to keep the trees upright from bending, they tye ropes or lines from the one to the other, that the contact might be enjoyed by the contact of a middle body. But this may be feigned, or at leaſt amplified. Nevertheleſs, I am apt enough to think, that this ſame *binarium* of a ſtronger and a weaker, like unto maſculine and feminine, doth hold in all living bodies. It is confounded ſometimes; as in ſome creatures of putrefaction, wherein no

marks of diſtinction appear: and it is doubled ſometimes, as in hermaphrodites: but generally there is a degree of ſtrength in moſt ſpecies.

609. THE participles or confiners between plants and living creatures, are ſuch chiefly as are fixed, and have no local motion of remove, though they have a motion in their parts; ſuch as are oiſters, cockles, and ſuch like. There is a fabulous narration, that in the northern countries there ſhould be an herb that groweth in the likeneſs of a lamb, and feedeth upon the graſs, in ſuch ſort as it will bare the graſs round about. But I ſuppoſe that the figure maketh the fable; for ſo we ſee, there be bee-flowers, *&c.* And as for the graſs, it ſeemeth the plant having a great ſtalk and top doth prey upon the graſs a good way about, by drawing the juice of the earth from it.

*Experiments promiſcuous touching plants.*

610. THE *Indian* fig boweth its roots down ſo low in one year, as of it ſelf it taketh root again; and ſo multiplieth from root to root, making of one tree a kind of wood. The cauſe is the plenty of the ſap, and the ſoftneſs of the ſtalk, which maketh the bough, being over-loaden, and not ſtiffly upheld, weigh down. It hath leaves as broad as a little target, but the fruit no bigger than beans. The cauſe is, for that the continual ſhade increaſeth the leaves, and abateth the fruit, which nevertheleſs is of a pleaſant taſte. And that (no doubt) is cauſed by the ſuppleneſs and gentleneſs of the juice of that plant, being that which maketh the boughs alſo ſo flexible.

611. IT is reported by one of the ancients, that there is a certain *Indian* tree, having few but very great leaves, three cubits long and two broad; and that the fruit being of good taſte, groweth out of the bark. It may be, there be plants that pour out the ſap ſo faſt, as they have no leiſure either to divide into many leaves, or to put forth ſtalks to the fruit. With us trees (generally) have ſmall leaves in compariſon. The fig hath the greateſt; and next it the vine, mulberry, and ſycamore; and the leaſt are thoſe of the willow, birch, and thorn. But there be found herbs with far greater leaves than any tree; as the burr, gourd, cucumber, and colewort. The cauſe is, (like to that of the *Indian* fig) the haſty and plentiful putting forth of the ſap.

612. THERE be three things in uſe for ſweetneſs; ſugar, honey, manna. For ſugar, to the ancients it was ſcarce known, and little uſed. It is found in canes: *Quaere*, whether to the firſt knuckle, or further up? And whether the very bark of the cane it ſelf do yield ſugar, or no? For honey, the bee maketh it, or gathereth it; but I have heard from one that was induſtrious in huſbandry, that the labour of the bee is about the wax; and that he hath known in the beginning of *May*, honey-combs empty of honey; and within a fortnight, when the ſweet dews fall, filled like a cellar. It is reported by ſome of the ancients, that there is a tree called *Occhus* in the valleys of *Hyrcania*, that diſtilleth honey in the mornings. It is not unlike that the ſap and tears of ſome trees may be ſweet. It may be alſo, that ſome ſweet juices, fit for many uſes, may be concocted out of fruits, to the thickneſs of honey, or perhaps of ſugar; the likelieſt are raiſins of the ſun, figs, and currans: the means may be enquired.

613. THE ancients report of a tree by the *Perſian* ſea, upon the ſhore ſands, which is nouriſhed with the ſalt water; and when the tide ebbeth, you ſhall ſee the roots as it were bare without bark, (being as it ſeemeth corroded by the ſalt) and graſping the ſands like a crab; which nevertheleſs beareth a fruit,

fruit. It were good to try ſome hard trees, as a ſervice tree, or fir tree, by ſetting them within the ſands.

614. THERE be of plants which they uſe for garments, theſe that follow: hemp, flax, cotton, nettles, (whereof they make nettle cloth) *ſericum*, which is a growing ſilk; they make alſo cables of the bark of lime trees. It is the ſtalk that maketh the filaceous matter commonly; and ſometimes the down that groweth above.

615. THEY have in ſome countries a plant of a roſy colour, which ſhutteth in the night, openeth in the morning, and openeth wide at noon; which the inhabitants of thoſe countries ſay is a plant that ſleepeth. There be ſleepers enough then; for almoſt all flowers do the like.

616. SOME plants there are, but rare, that have a moſſy or downy root; and likewiſe that have a number of threads, like beards; as mandrakes; whereof witches and impoſtors make an ugly image, giving it the form of a face at the top of the root, and leave thoſe ſtrings to make a broad beard down to the foot. Alſo there is a kind of nard in *Crete*, (being a kind of *phu*) that hath a root hairy, like a rough-footed dove's foot. So as you may ſee, there are of roots bulbous roots, fibrous roots, and hirſute roots. And, I take it, in the bulbous, the ſap haſteneth moſt to the air and ſun: in the fibrous, the ſap delighteth more in the earth, and therefore putteth downward: and the hirſute is a middle between both; that beſides the putting forth upwards and downwards, putteth forth in round.

617. THERE are ſome tears of trees, which are kembed from the beards of goats: for when the goats bite and crop them, eſpecially in the mornings, the dew being on, the tear cometh forth, and hangeth upon their beards: of this ſort is ſome kind of *ladanum*.

618. THE irrigation of the plane tree by wine, is reported by the ancients to make it fruitful. It would be tried likewiſe with roots; for upon ſeeds it worketh no great effects.

619. THE way to carry foreign roots a long way, is to veſſel them cloſe in earthen veſſels. But if the veſſels be not very great, you muſt make ſome holes in the bottom, to give ſome refreſhment to the roots; which otherwiſe (as it ſeemeth) will decay and ſuffocate.

620. THE ancient cinnamon was, of all other plants, while it grew, the dryeſt; and thoſe things which are known to comfort other plants, did make that more ſteril; for in ſhowers it proſpered worſt: it grew alſo amongſt baſhes of other kinds, where commonly plants do not thrive; neither did it love the ſun. There might be one cauſe of all thoſe effects, namely, the ſpuing nouriſhment which that plant required. *Quaere*, how far *caſſia*, which is now the ſubſtitute of cinnamon, doth participate of theſe things.

621. IT is reported by one of the ancients, that *caſſia*, when it is gathered, is put into the ſkins of beaſts newly flayed; and that the ſkins corrupting and breeding worms, the worms do devour the pith and marrow of it, and ſo make it hollow; but meddle not with the bark, becauſe to them it is bitter.

622. THERE were in ancient time vines of far greater bodies than we know any; for there have been cups made of them, and an image of *Jupiter*. But it is like they were wild vines; for the vines that they uſe for wine, are ſo often cut, and ſo much digged and dreſſed, that their ſap ſpendeth into the grapes, and ſo the ſtalk cannot increaſe much in bulk. The wood of vines is very durable, without rotting. And that which is ſtrange, though no tree hath the twigs, while they are green, ſo brittle, yet the wood dried is ex-

tream tough; and was uſed by the captains of armies amongſt the *Romans* for their cudgels.

623. It is reported, that in ſome places vines are ſuffered to grow like herbs, ſpreading upon the ground; and that the grapes of thoſe vines are very great. It were good to make trial, whether plants that uſe to be born up by props, will not put forth greater leaves and greater fruits if they be laid along the ground; as hops, ivy, woodbine, *&c.*

624. Quinces, or apples, *&c.* if you will keep them long, drown them in honey; but becauſe honey (perhaps) will give them a taſte over-luſcious, it were good to make trial in powder of ſugar, or in ſyrup of wine, only boiled to height. Both theſe would likewiſe be tried in oranges, lemons, and pomgranates; for the powder of ſugar, and ſyrup of wine, will ſerve for times more than once.

625. The conſervation of fruit would be alſo tried in veſſels filled with fine ſand, or with powder of chalk; or in meal and flower; or in duſt of oak wood; or in mill.

626. Such fruits as you appoint for long keeping, you muſt gather before they be full ripe; and in a fair and dry day towards noon; and when the wind bloweth not ſouth; and when the moon is under the earth; and in decreaſe.

627. Take grapes, and hang them in an empty veſſel well ſtopped; and ſet the veſſel not in a cellar, but in ſome dry place; and it is ſaid they will laſt long. But it is reported by ſome, they will keep better in a veſſel half full of wine, ſo that the grapes touch not the wine.

628. It is reported, that the preſerving of the ſtalk helpeth to preſerve the grape; eſpecially if the ſtalk be put into the pith of elder, the elder not touching the fruit.

629. It is reported by ſome of the ancients, that fruit put in bottles, and the bottles let down into wells under water, will keep long.

630. Of herbs and plants, ſome are good to eat raw; as lettuce, endive, purſlane, tarragon, creſſes, cucumbers, muſk-melons, radiſh, *&c.* others only after they are boiled, or have paſſed the fire; as parſley, clary, ſage, parſnips, turnips, aſparagus, artichoaks, (though they alſo being young are eaten raw:) but a number of herbs are not eſculent at all; as wormwood, graſs, green corn, centaury, hyſſop, lavender, balm, *&c.* The cauſes are, for that the herbs that are not eſculent, do want the two taſtes in which nouriſhment reſteth; which are fat and ſweet; and have (contrariwiſe) bitter and over-ſtrong taſtes, or a juice ſo crude, as cannot be ripened to the degree of nouriſhment. Herbs and plants that are eſculent raw, have fatneſs, or ſweetneſs, (as all eſculent fruits;) ſuch are onions, lettuce, *&c.* But then it muſt be ſuch a fatneſs (for as for ſweet things, they are in effect always eſculent) as is not over-groſs, and loading of the ſtomach: for parſnips and leeks have fatneſs; but it is too groſs and heavy without boiling. It muſt be alſo in a ſubſtance ſomewhat tender; for we ſee wheat, barley, artichoaks, are no good nouriſhment till they have paſſed the fire; but the fire doth ripen, and maketh them ſoft and tender, and ſo they become eſculent. As for radiſh and tarragon, and the like, they are for condiments, and not for nouriſhment. And even ſome of thoſe herbs which are not eſculent, are notwithſtanding poculent; as hops, broom, *&c.* *Quaere*, what herbs are good for drink beſides the two aforenamed; for that it may (perhaps) eaſe the charge of brewing, if they make beer to require leſs malt, or make it laſt longer.

631. Parts fit for the nouriſhment of man in plants are, ſeeds, roots, and

fruits; but chiefly ſeeds and roots. For leaves, they give no nouriſhment at all, or very little: no more do flowers, or bloſſoms, or ſtalks. The reaſon is, for that roots, and ſeeds, and fruits, (in as much as all plants conſiſt of an oily and watery ſubſtance commixed) have more of the oily ſubſtance; and leaves, flowers, *&c.* of the watery. And ſecondly, they are more concocted; for the root which continueth ever in the earth, is ſtill concocted by the earth; and fruits and grains, (we ſee) are half a year or more in concocting; whereas leaves are out and perfect in a month.

632. PLANTS (for the moſt part) are more ſtrong both in taſte and ſmell in the ſeed, than in the leaf and root. The cauſe is, for that in plants that are not of a fierce and eager ſpirit, the virtue is encreaſed by concoction and maturation, which is ever moſt in the ſeed; but in plants that are of a fierce and eager ſpirit, they are ſtronger whilſt the ſpirit is incloſed in the root; and the ſpirits do but weaken and diſſipate when they come to the air and ſun; as we ſee it in onions, garlick, dragon, *&c.* Nay, there be plants that have their roots very hot and aromatical, and their ſeeds rather inſipid; as ginger. The cauſe is (as was touched before) for that the heat of thoſe plants is very diſſipable: which under the earth is contained and held in; but when it cometh to the air it exhaleth.

633. THE juices of fruits are either watery or oily. I reckon among the watery, all the fruits out of which drink is expreſſed; as the grape, the apple, the pear, the cherry, the pomgranate, *&c.* And there are ſome others which, though they be not in uſe for drink, yet they appear to be of the ſame nature; as plumbs, ſervices, mulberries, raſps, oranges, lemons, *&c.* and for thoſe juices that are ſo fleſhy, as they cannot make drink by expreſſion, yet (perhaps) they may make drink by mixture of water;

*Poculaque admiſtis imitantur vitea ſorbis.*

And it may be hips and briar-berries would do the like. Thoſe that have oily juices, are, olives, almonds, nuts of all ſorts, pine-apples, *&c.* and their juices are all inflammable. And you muſt obſerve alſo, that ſome of the watery juices, after they have gathered ſpirit, will burn and inflame; as wine. There is a third kind of fruit that is ſweet, without either ſharpneſs or oilineſs: ſuch as is the fig and the date.

634. IT hath been noted, that moſt trees, and ſpecially thoſe that bear maſt, are fruitful but once in two years. The cauſe (no doubt) is, the expence of ſap; for many orchard trees, well cultured, will bear divers years together.

635. THERE is no tree, which beſides the natural fruit, doth bear ſo many baſtard fruits as the oak doth: for beſides the acorns, it beareth galls, oak apples, and certain oak nuts, which are inflammable; and certain oak berries, ſticking cloſe to the body of the tree without ſtalk. It beareth alſo miſſeltoe, though rarely. The cauſe of all theſe may be, the cloſeneſs and ſolidneſs of the wood, and pith of the oak; which maketh ſeveral juices find ſeveral eruptions. And therefore if you will deviſe to make any ſuper-plants, you muſt ever give the ſap plentiful riſing and hard iſſue.

636. THERE are two excreſcences which grow upon trees; both of them in the nature of muſhrooms: the one the *Romans* called *boletus*; which groweth upon the roots of oaks; and was one of the dainties of their table; the other is medicinal, that is called agarick, (whereof we have ſpoken before) which groweth upon the tops of oaks; though it be affirmed by ſome, that it groweth alſo at the roots. I do conceive, that many excreſcences of

trees

trees grow chiefly where the tree is dead or faded; for that the natural ſap of the tree corrupteth into ſome preternatural ſubſtance.

637. THE greater part of trees bear moſt and beſt on the lower boughs; as oaks, figs, walnuts, pears, *&c.* but ſome bear beſt on the top boughs; as crabs, *&c.* Thoſe that bear beſt below, are ſuch as ſhade doth more good to than hurt. For generally all fruits bear beſt loweſt; becauſe the ſap tireth not, having but a ſhort way: and therefore in fruits ſpread upon walls, the loweſt are the greateſt, as was formerly ſaid: ſo it is the ſhade that hindereth the lower boughs; except it be in ſuch trees as delight in ſhade; or at leaſt bear it well. And therefore they are either ſtrong trees, as the oak; or elſe they have large leaves, as the walnut and fig; or elſe they grow in *pyramis*, as the pear. But if they require very much ſun, they bear beſt on the top; as it is in crabs, apples, plumbs, *&c.*

638. THERE be trees that bear beſt when they begin to be old; as almonds, pears, vines, and all trees that give maſt. The cauſe is, for that all trees that bear maſt, have an oily fruit; and young trees have a more watery juice, and leſs concocted: and of the ſame kind alſo is the almond. The pear likewiſe, though it be not oily, yet it requireth much ſap, and well concocted; for we ſee it is a heavy fruit and ſolid; much more than apples, plumbs, *&c.* As for the vine, it is noted, that it beareth more grapes when it is young; but grapes that make better wine when it is old; for that the juice is better concocted: and we ſee, that wine is inflammable; ſo as it hath a kind of oilineſs. But the moſt part of trees, amongſt which are apples, plumbs, *&c.* bear beſt when they are young.

639. THERE be plants that have a milk in them when they are cut; as figs, old lettuce, ſow thiſtles, ſpurge, *&c.* The cauſe may be an inception of putrefaction: for thoſe milks have all an acrimony; though one would think they ſhould be lenitive. For if you write upon paper with the milk of the fig, the letters will not be ſeen, until you hold the paper before the fire, and then they wax brown; which ſheweth that it is a ſharp or fretting juice: lettuce is thought poiſonous, when it is ſo old as to have milk; ſpurge is a kind of poiſon in it ſelf; and as for ſow thiſtles, though coneys eat them, yet ſheep and cattle will not touch them: and beſides, the milk of them rubbed upon warts, in ſhort time weareth them away; which ſheweth the milk of them to be corroſive. We ſee alſo, that wheat and other corn ſown, if you take them forth of the ground before they ſprout, are full of milk; and the beginning of germination is ever a kind of putrefaction of the ſeed. *Euphorbium* alſo hath a milk, though not very white, which is of a great acrimony: and ſaladine hath a yellow milk, which hath likewiſe much acrimony; for it cleanſeth the eyes. It is good alſo for cataracts.

640. MUSHROOMS are reported to grow, as well upon the bodies of trees, as upon their roots, or upon the earth; and eſpecially upon the oak. The cauſe is, for that ſtrong trees are towards ſuch excreſcences in the nature of earth; and therefore put forth moſs, muſhrooms, and the like.

641. THERE is hardly found a plant that yieldeth a red juice in the blade or ear; except it be the tree that beareth *ſanguis draconis*; which groweth (chiefly) in the iſland *Socotra*: the herb *amaranthus* (indeed) is red all over; and braſil is red in the wood: and ſo is red ſanders. The tree of the *ſanguis draconis* groweth in the form of a ſugar loaf. It is like the ſap of that plant, concocteth in the body of the tree. For we ſee that grapes and pomgranates are red in the juice, but are green in the tear: and this maketh the tree

of

of *ſanguis draconis* leſſer towards the top; becauſe the juice haſteneth not up; and beſides, it is very aſtringent; and therefore of ſlow motion.

642. IT is reported, that ſweet moſs, beſides that upon the apple trees, groweth likewiſe (ſometimes) upon poplars; and yet (generally) the poplar is a ſmooth tree of bark, and hath little moſs. The moſs of the larix tree burneth alſo ſweet, and ſparkleth in the burning. *Quaere* of the moſſes of odorate trees; as cedar, cypreſs, *lignum aloes*, *&c.*

643. THE death that is moſt without pain, hath been noted to be upon the taking of the potion of hemlock; which in humanity was the form of execution of capital offenders in *Athens*. The poiſon of the aſp, that *Cleopatra* uſed, hath ſome affinity with it. The cauſe is, for that the torments of death are chiefly raiſed by the ſtriſe of the ſpirits; and theſe vapours quench the ſpirits by degrees; like to the death of an extreme old man. I conceive it is leſs painful than *opium*, becauſe *opium* hath parts of heat mixed.

644. THERE be fruits that are ſweet before they be ripe: as myrobalanes; ſo fenel-ſeeds are ſweet before they ripen, and after grow ſpicy. And ſome never ripen to be ſweet; as tamarinds, berberries, crabs, ſloes, *&c.* The cauſe is, for that the former kind have much and ſubtle heat, which cauſeth early ſweetneſs; the latter have a cold and acid juice, which no heat of the ſun can ſweeten. But as for the myrobalane, it hath parts of contrary natures; for it is ſweet and yet aſtringent.

645. THERE be few herbs that have a ſalt taſte; and contrariwiſe all blood of living creatures hath a ſaltneſs. The cauſe may be, for that ſalt, though it be the rudiment of life, yet in plants the original taſte remaineth not; for you ſhall have them bitter, ſour, ſweet, biting, but ſeldom ſalt: but in living creatures, all thoſe high taſtes may happen to be (ſometimes) in the humours, but are ſeldom in the fleſh or ſubſtance; becauſe it is of a more oily nature; which is not very ſuſceptible of thoſe taſtes; and the ſaltneſs it ſelf of blood, is but a light and ſecret ſaltneſs: and even among plants, ſome do participate of ſaltneſs, as *alga marina*, ſamphire, ſcurvy-graſs, *&c.* And they report, there is in ſome of the *Indian* ſeas a ſwimming plant, which they call *ſalgazus*, ſpreading over the ſea in ſuch ſort, as one would think it were a meadow. It is certain, that out of the aſhes of all plants they extract a ſalt which they uſe in medicines.

646. IT is reported by one of the ancients, that there is an herb growing in the water, called *lincoſtis*, which is full of prickles: this herb putteth forth another ſmall herb out of the leaf; which is imputed to ſome moiſture that is gathered between the prickles, which putrefied by the ſun germinateth. But I remember alſo I have ſeen, for a great rarity, one roſe grow out of another like honey-ſuckles, that they call top and top-gallants.

647. BARLEY (as appeareth in the malting) being ſteeped in water three days, and afterwards the water drained from it, and the barley turned upon a dry floor, will ſprout half an inch long at leaſt: and if it be let alone, and not turned, much more; until the heart be out. Wheat will do the ſame. Try it alſo with peaſe and beans. This experiment is not like that of the orpine, and ſemper-vive; for there it is of the old ſtore, for no water is added; but here it is nouriſhed from the water. The experiment would be farther driven: for it appeareth already, by that which hath been ſaid, that earth is not neceſſary to the firſt ſprouting of plants; and we ſee that roſe buds ſet in water will blow: therefore try whether the ſprouts of ſuch grains may not be raiſed to a farther degree; as to an herb, or flower, with water only; or ſome ſmall commixture of earth: for if they will, it ſhould ſeem by the experiments

periments before, both of the malt and of the roſes, that they will come far faſter on in water than in earth: for the nouriſhment is eaſilier drawn out of water, than out of earth. It may give ſome light alſo, that drink infuſed with fleſh, as that with the capon, *&c.* will nouriſh faſter and eaſilier than meat and drink together. Try the ſame experiment with roots as well as with grains: as for example, take a turnip, and ſteep it a while, and then dry it, and ſee whether it will ſprout.

648. MALT in the drenching will ſwell; and that in ſuch a manner, as after the putting forth in ſprouts, and the drying upon the kiln, there will be gained at leaſt a buſhel in eight; and yet the ſprouts are rubbed off; and there will be a buſhel of duſt beſides the malt: which I ſuppoſe to be, not only by the looſe and open laying of the parts, but by ſome addition of ſubſtance drawn from the water in which it was ſteeped.

649. MALT gathereth a ſweetneſs to the taſte, which appeareth yet more in the wort. The dulcoration of things is worthy to be tried to the full; for that dulcoration importeth a degree to nouriſhment: and the making of things inalimental, to become alimental, may be an experiment of great profit for making new victual.

650. MOST ſeeds in the growing, leave their huſk or rind about the root; but the onion will carry it up, that it will be like a cap upon the top of the young onion. The cauſe may be, for that the ſkin or huſk is not eaſy to break; as we ſee by the pilling of onions, what a holding ſubſtance the ſkin is.

651. PLANTS, that have curled leaves, do all abound with moiſture; which cometh ſo faſt on, as they cannot ſpread themſelves plain, but muſt needs gather together. The weakeſt kind of curling is roughneſs; as in clary and burr. The ſecond is curling on the ſides; as in lettuce, and young cabbage: and the third is folding into an head; as in cabbage full grown, and cabbage lettuce.

652. IT is reported, that fir and pine, eſpecially if they be old and putrefied, though they ſhine not as ſome rotten woods do, yet in the ſudden breaking they will ſparkle like hard ſugar.

653. THE roots of trees do (ſome of them) put downwards deep into the ground; as the oak, pine, fir, *&c.* Some ſpread more towards the ſurface of the earth; as the aſh, cypreſs tree, olive, *&c.* The cauſe of this latter may be, for that ſuch trees as love the ſun, do not willingly deſcend far into the earth; and therefore they are (commonly) trees that ſhoot up much; for in their body, their deſire of approach to the ſun maketh them ſpread the leſs. And the ſame reaſon under ground, to avoid receſs from the ſun, maketh them ſpread the more. And we ſee it cometh to paſs in ſome trees which have been planted too deep in the ground, that for love of approach to the ſun, they forſake their firſt root, and put out another more towards the top of the earth. And we ſee alſo, that the olive is full of oily juice; and aſh maketh the beſt fire; and cypreſs is an hot tree. As for the oak, which is of the former ſort, it loveth the earth; and therefore groweth ſlowly. And for the pine and fir likewiſe, they have ſo much heat in themſelves, as they need leſs the heat of the ſun. There be herbs alſo that have the ſame difference; as the herb they call *morſus diaboli*; which putteth the root down ſo low, as you cannot pull it up without breaking; which gave occaſion to the name and fable; for that it was ſaid, it was ſo wholeſome a root, that the devil, when it was gathered, bit it for envy: and ſome of the ancients do report, that there was a goodly fir, which they deſired to remove whole, that had a root under ground eight cubits deep; and ſo the root came up broken.

654. IT

654. IT hath been obſerved, that a branch of a tree, being unbarked ſome ſpace at the bottom, and ſo ſet into the ground, hath grown; even of ſuch trees, as if the branch were ſet with the bark on, they would not grow; yet contrariwiſe we ſee, that a tree pared round in the body above ground, will die. The cauſe may be, for that the unbarkt part draweth the nouriſhment beſt, but the bark continueth it only.

655. GRAPES will continue freſh and moiſt all winter long, if you hang them cluſter by cluſter in the roof of a warm room; eſpecially if when you gather the cluſter, you take off with the cluſter ſome of the ſtock.

656. THE reed or cane is a watry plant, and groweth not but in the water; it hath theſe properties; that it is hollow; that it is knuckled both ſtalk and root; that being dry, it is more hard and fragile than other wood, that it putteth forth no boughs, though many ſtalks out of one root. It differeth much in greatneſs; the ſmalleſt being fit for thatching of houſes; and ſtopping the chinks of ſhips; better than glew or pitch. The ſecond bigneſs is uſed for angle-rods and ſtaves; and in *China* for beating of offenders upon the thighs. The differing kinds of them are; the common reed; the *caſſia fiſtula*; and the ſugar reed. Of all plants it boweth the eaſieſt, and riſeth again. It ſeemeth, that amongſt plants which are nouriſhed with mixture of earth and water, it draweth moſt nouriſhment from water; which maketh it the ſmootheſt of all others in bark, and the holloweſt in body.

657. THE ſap of trees when they are let blood, is of differing natures. Some more watery and clear; as that of vines, of beeches, of pears: ſome thick, as apples: ſome gummy, as cherries: ſome frothy, as elms: ſome milky, as figs. In mulberries, the ſap ſeemeth to be (almoſt) towards the bark only; for if you cut the tree a little into the bark with a ſtone, it will come forth; if you pierce it deeper with a tool, it will be dry. The trees which have the moiſteſt juices in their fruit, have commonly the moiſteſt ſap in their body; for the vines and pears are very moiſt; apples ſomewhat more ſpongy: the milk of the fig hath the quality of the rennet, to gather cheeſe: and ſo have certain ſour herbs wherewith they make cheeſe in *Lent*.

658. THE timber and wood are in ſome trees more clean, in ſome more knotty; and it is a good trial, to try it by ſpeaking at one end, and laying the ear at the other: for if it be knotty, the voice will not paſs well. Some have the veins more varied and chambletted; as oak, whereof wainſcot is made; maple, whereof trenchers are made: ſome more ſmooth, as fir and walnut: ſome do more eaſily breed worms and ſpiders; ſome more hardly, as it is ſaid of *Iriſh* trees: beſides there be a number of differences that concern their uſe; as oak, cedar, and cheſtnut, are the beſt builders: ſome are beſt for plough timber, as aſh; ſome for peers, that are ſometimes wet and ſometimes dry, as elm; ſome for planchers, as deal; ſome for tables, cupboards, and deſks, as walnuts; ſome for ſhip timber, as oaks that grow in moiſt grounds; for that maketh the timber tough, and not apt to rift with ordnance; wherein *Engliſh* and *Iriſh* timber are thought to excel: ſome for maſts of ſhips, as fir and pine, becauſe of their length, ſtraightneſs, and lightneſs: ſome for pale, as oak; ſome for fuel, as aſh; and ſo of the reſt.

659. THE coming of trees and plants in certain regions, and not in others, is ſometimes caſual: for many have been tranſlated, and have proſpered well; as damaſk roſes, that have not been known in *England* above an hundred years, and now are ſo common. But the liking of plants in certain ſoils more than in others, is merely natural; as the fir and pine love the



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mountains; the poplar, willow, fallow, and alder, love rivers and moiſt places; the aſh loveth coppices, but is beſt in ſtandards alone; juniper loveth chalk; and ſo do moſt fruit trees; ſamphire groweth but upon rocks; reeds and oſiers grow where they are waſhed with water; the vine loveth ſides of hills, turning upon the ſouth-eaſt ſun, *&c.*

660. THE putting forth of certain herbs, diſcovereth of what nature the ground where they put forth is; as wild thyme ſheweth good feeding ground for cattel; betony and ſtrawberries ſhew grounds fit for wood; camomile ſheweth mellow grounds fit for wheat. Muſtard-ſeed, growing after the plough, ſheweth a good ſtrong ground alſo for wheat: burnet ſheweth good meadow, and the like.

661. THERE are found in divers countries ſome other plants that grow out of trees, and plants, beſides miſſeltoe: as in *Syria*, there is an herb called *caſſytas*, that groweth out of tall trees, and windeth it ſelf about the ſame tree where it groweth, and ſometimes about thorns. There is a kind of polypode that groweth out of trees, though it windeth not. So likewiſe an herb called *faunos*, upon the wild olive. And an herb called *hippophaeſton* upon the fullers thorn; which, they ſay, is good for the falling-ſickneſs.

662. IT hath been obſerved by ſome of the ancients, that howſoever cold and eaſterly winds are thought to be great enemies to fruit, yet nevertheleſs ſouth winds are alſo found to do hurt, eſpecially in the bloſſoming time; and the more, if ſhowers follow. It ſeemeth, they call forth the moiſture too faſt. The weſt winds are the beſt. It hath been obſerved alſo, that green and open winters do hurt trees; inſomuch as if two or three ſuch winters come together, almond trees, and ſome other trees, will die. The cauſe is the ſame with the former, becauſe the luſt of the earth over-ſpendeth it ſelf; howſoever ſome other of the ancients have commended warm winters.

663. SNOWS lying long cauſe a fruitful year; for firſt, they keep in the ſtrength of the earth; ſecondly, they water the earth better than rain: for in ſnow, the earth doth (as it were) ſuck the water, as out of the teat: thirdly, the moiſture of ſnow is the fineſt moiſture, for it is the froth of the cloudy waters.

664. SHOWERS, if they come a little before the ripening of fruits, do good to all ſucculent and moiſt fruits; as vines, olives, pomgranates; yet it is rather for plenty than for goodneſs; for the beſt wines are in the drieſt vintages: ſmall ſhowers are likewiſe good for corn, ſo as parching heats come not upon them. Generally night ſhowers are better than day ſhowers, for that the ſun followeth not ſo faſt upon them; and we ſee even in watering by the hand, it is beſt in ſummer time to water in the evening.

665. THE differences of earths, and the trial of them, are worthy to be diligently inquired. The earth, that with ſhowers doth eaſilieſt ſoften, is commended; and yet ſome earth of that kind will be very dry and hard before the ſhowers. The earth that caſteth up from the plough a great clod, is not ſo good as that which caſteth up a ſmaller clod. The earth that putteth forth moſs eaſily, and may be called mouldy, is not good. The earth that ſmelleth well upon the digging, or ploughing, is commended; as containing the juice of vegetables almoſt already prepared. It is thought by ſome, that the ends of low rain-bows fall more upon one kind of earth than upon another; as it may well be; for that the earth is moſt roſcid: and therefore it is commended for a ſign of good earth. The poorneſs of the herbs (it is plain) ſhew the poorneſs of the earth; and eſpecially if they be in colour more dark: but if the herbs ſhew withered, or blaſted at the top,

top, it ſheweth the earth to be very cold; and ſo doth the moſſineſs of trees. The earth, whereof the graſs is ſoon parched with the ſun, and toaſted, is commonly forced earth, and barren in its own nature. The tender, cheſſom, and mellow earth, is the beſt, being mere mould, between the two extreams of clay and ſand, eſpecially if it be not loamy and binding. The earth, that after rain will ſcarce be ploughed, is commonly fruitful: for it is cleaving, and full of juice.

666. IT is ſtrange, which is obſerved by ſome of the ancients, that duſt helpeth the fruitfulneſs of trees, and of vines by name; inſomuch as they caſt duſt upon them of purpoſe. It ſhould ſeem, that that powdering, when a ſhower cometh, maketh a kind of ſoiling to the tree, being earth and water finely laid on. And they note, that countries where the fields and ways are duſty bear the beſt vines.

667. IT is commended by the ancients for an excellent help to trees, to lay the ſtalks and leaves of lupins about the roots, or to plough them into the ground where you will ſow corn. The burning alſo of the cuttings of vines, and caſting them upon land, doth much good. And it was generally received of old, that dunging of grounds when the weſt wind bloweth, and in the decreaſe of the moon, doth greatly help; the earth (as it ſeemeth) being then more thirſty and open to receive the dung.

668. THE grafting of vines upon vines (as I take it) is not now in uſe: the ancients had it, and that three ways: the firſt was inciſion, which is the ordinary manner of grafting: the ſecond was terebration through the middle of the ſtock, and putting in the cions there: and the third was paring of two vines that grow together to the marrow, and binding them cloſe.

669. THE diſeaſes and ill accidents of corn, are worthy to be enquired; and would be more worthy to be enquired, if it were in mens power to help them; whereas many of them are not to be remedied. The mildew is one of the greateſt, which (out of queſtion) cometh by cloſeneſs of air; and therefore in hills, or large champain grounds, it ſeldom cometh; ſuch as is with us *York*'s woald. This cannot be remedied, otherwiſe than that in countries of ſmall encloſure, the grounds be turned into larger fields: which I have known to do good in ſome farms. Another diſeaſe is the putting forth of wild oats, whereinto corn oftentimes (eſpecially barley) doth degenerate. It happeneth chiefly from the weakneſs of the grain that is ſown; for if it be either too old, or mouldy, it will bring forth wild oats. Another diſeaſe is the ſatiety of the ground; for if you ſow one ground ſtill with the ſame corn, (I mean not the ſame corn that grew upon the ſame ground) but the ſame kind of grain, (as wheat, barley, *&c.*) it will proſper but poorly: therefore, beſides the reſting of the ground, you muſt vary the ſeed. Another ill accident is from the winds, which hurt at two times; at the flowering, by ſhaking off the flowers; and at the full ripening, by ſhaking out the corn. Another ill accident is drought, at the ſpindling of the corn, which with us is rare, but in hotter countries common: inſomuch as the word *calamitas* was firſt derived from *calamus*, when the corn could not get out of the ſtalk. Another ill accident is over-wet at ſowing time, which with us breedeth much dearth, inſomuch as the corn never cometh up; and (many times) they are forced to re-ſow ſummer corn, where they ſowed winter corn. Another ill accident is bitter froſts continued without ſnow, eſpecially in the beginning of the winter, after the ſeed is new ſown. Another diſeaſe is worms; which ſometimes breed in the root, and happen upon hot ſuns and ſhowers, immediately after the ſowing; and

another worm breedeth in the ear it ſelf; eſpecially when hot ſuns break often out of clouds. Another diſeaſe is weeds; and they are ſuch as either choak and overſhadow the corn, and bear it down; or ſtarve the corn, and deprive it of nouriſhment. Another diſeaſe is over-rankneſs of the corn; which they uſe to remedy, by mowing it after it is come up; or putting ſheep into it. Another ill accident, is laying of corn with great rains, near or in harveſt. Another ill accident is, if the ſeed happen to have touched oil, or any thing that is fat; for thoſe ſubſtances have an antipathy with nouriſhment of water.

670. The remedies of the diſeaſes of corn have been obſerved as followeth. The ſteeping of the grain before ſowing, a little time in wine, is thought a preſervative: the mingling of ſeed corn with aſhes, is thought to be good: the ſowing at the wane of the moon, is thought to make the corn ſound: it hath not been practiſed, but it is thought to be of uſe, to make ſome miſcellane in corn; as if you ſow a few beans with wheat, your wheat will be the better. It hath been obſerved, that the ſowing of corn with houſleek doth good. Though grain, that toucheth oil or fat, receiveth hurt, yet the ſteeping of it in the dregs of oil, when it beginneth to putrefy, (which they call *amurca*) is thought to aſſure it againſt worms. It is reported alſo, that if corn be mowed, it will make the grain longer, but emptier, and having more of the huſk.

671. It hath been noted, that ſeed of a year old is the beſt; and of two or three years is worſe; and that which is more old is quite barren; though (no doubt) ſome ſeed and grains laſt better than others. The corn which in the vanning lieth loweſt is the beſt: and the corn, which broken or bitten retaineth a little yellowneſs, is better than that which is very white.

672. It hath been obſerved, that of all roots of herbs, the root of ſorrel goeth the fartheſt into the earth; inſomuch as it hath been known to go three cubits deep; and that it is the root that continueth fit (longeſt) to be ſet again, of any root that groweth. It is a cold and acid herb, that (as it ſeemeth) loveth the earth, and is not much drawn by the ſun.

673. It hath been obſerved, that ſome herbs like beſt being watered with ſalt water; as radiſh, beet, rue, penyroyal; this trial would be extended to ſome other herbs; eſpecially ſuch as are ſtrong, as tarragon, muſtard-ſeed, rocket, and the like.

674. It is ſtrange that is generally received, how ſome poiſonous beaſts affect odorate and wholeſome herbs; as that the ſnake loveth fenel; that the toad will be much under ſage; that frogs will be in cinquefoil. It may be it is rather the ſhade, or other coverture, that they take liking in, than the virtue of the herb.

675. It were a matter of great profit, (ſave that I doubt it is too conjectural to venture upon) if one could diſcern what corn, herbs, or fruits, are like to be in plenty or ſcarcity, by ſome ſigns and prognoſticks in the beginning of the year: for as for thoſe that are like to be in plenty, they may be bargained for upon the ground; as the old relation was of *Thales*; who to ſhew how eaſy it was for a philoſopher to be rich, when he foreſaw a great plenty of olives, made a monopoly of them. And for ſcarcity, men may make profit in keeping better the old ſtore. Long continuance of ſnow is believed to make a fruitful year of corn: an early winter, or a very late winter, a barren year of corn: an open and ſerene winter, an ill fruit of year: theſe we have partly touched before: but other prognoſticks of like nature are diligently to be enquired.

676. THERE ſeem to be in ſome plants, ſingularities, wherein they differ from all other; the olive hath the oily part only on the outſide; whereas all other fruits have it in the nut or kernel. The fir hath (in effect) no ſtone, nut, nor kernel; except you will count the little grains kernels. The pomgranate and pine-apple have only amongſt fruits grains diſtinct in ſeveral cells. No herbs have curled leaves, but cabbage and cabbage lettuce. None have double leaves, one belonging to the ſtalk, another to the fruit or ſeed, but the artichoak. No flower hath that kind of ſpread that the woodbind hath. This may be a large field of contemplation; for it ſheweth that in the frame of nature, there is, in the producing of ſome ſpecies, a compoſition of matter, which happeneth oft, and may be much diverſified: in others, ſuch as happeneth rarely, and admitteth little variety: for ſo it is likewiſe in beaſts: dogs have a reſemblance with wolves and foxes; horſes with aſſes; kine with buffles; hares with coneys, *&c.* And ſo in birds: kites and keſtrels have a reſemblance with hawks; common doves with ring-doves and turtles; black birds with thruſhes and maviſes; crows with ravens, daws, and choughs, *&c.* But elephants and ſwine amongſt beaſts; and the bird of paradiſe and the peacock amongſt birds; and ſome few others; have ſcarce any other ſpecies that have affinity with them.

We leave the deſcription of plants, and their virtues, to herbals, and other like books of natural hiſtory; wherein mens diligence hath been great, even to curioſity: for our experiments are only ſuch, as do ever aſcend a degree to the deriving of cauſes, and extracting of axioms, which we are not ignorant but that ſome both of the ancient and modern writers, have alſo laboured; but their cauſes and axioms are ſo full of imagination, and ſo infected with the old received theories, as they are mere inquinations of experience, and concoct it not.

*Experiment ſolitary touching healing of wounds.*

677. It hath been obſerved by ſome of the ancients, that skins (eſpecially of rams) newly pulled off, and applied to the wounds of ſtripes, do keep them from ſwelling and exulcerating; and likewiſe heal them and cloſe them up; and that the whites of eggs do the ſame. The cauſe is a temperate conglutination; for both bodies are clammy and viſcous, and do bridle the deflux of humours to the hurts, without penning them in too much.

*Experiment ſolitary touching fat diffuſed in fleſh.*

678. YOU may turn (almoſt) all fleſh into a fatty ſubſtance, if you take fleſh, and cut it into pieces, and put the pieces into a glaſs covered with parchment; and ſo let the glaſs ſtand ſix or ſeven hours in boiling water. It may be an experiment of profit for making of fat, or greaſe, for many uſes; but then it muſt be of ſuch fleſh as is not edible; as horſes, dogs, bears, foxes, badgers, *&c.*

*Experiment ſolitary touching ripening of drink before the time.*

679. IT is reported by one of the ancients, that new wine put into veſſels well ſtopped, and the veſſels let down into the ſea, will accelerate very much the making of them ripe and potable. The ſame would be tried in wort.

*Experiment ſolitary touching piloſity and plumage.*

680. BEASTS are more hairy than men, and ſavage men more than civil;

vil; and the plumage of birds exceedeth the piloſity of beaſts. The cauſe of the ſmoothneſs in men is not any abundance of heat and moiſture, tho' that indeed cauſeth piloſity; but there is requiſite to piloſity, not ſo much heat and moiſture as excrementitious heat and moiſture; (for whatſoever aſſimilateth, goeth not into the hair:) and excrementitious moiſture aboundeth moſt in beaſts, and men that are more ſavage. Much the ſame reaſon is there of the plumage of birds; for birds aſſimilate leſs, and excern more than beaſts; for their excrements are ever liquid, and their fleſh (generally) more dry: beſide, they have not inſtruments for urine; and ſo all the excrementitious moiſture goeth into the feathers: and therefore it is no marvel, though birds be commonly better meat than beaſts, becauſe their fleſh doth aſſimilate more finely, and ſecerneth more ſubtilly. Again, the head of man hath hair upon the firſt birth, which no other part of the body hath. The cauſe may be want of perſpiration; for much of the matter of hair, in the other parts of the body, goeth forth by inſenſible perſpiration; and beſides, the ſkull being of a more ſolid ſubſtance, nouriſheth and aſſimilateth leſs, and excerneth more; and ſo likewiſe doth the chin. We ſee alſo, that hair cometh not upon the palms of the hands, nor ſoles of the feet; which are parts more perſpirable. And children likewiſe are not hairy, for that their ſkins are more perſpirable.

*Experiment ſolitary touching the quickneſs of motion in birds.*

681. Birds are of ſwifter motion than beaſts; for the flight of many birds is ſwifter than the race of any beaſts. The cauſe is, for that the ſpirits in birds are in greater proportion, in compariſon of the bulk of their body, than in beaſts: for as for the reaſon that ſome give, that they are partly carried, whereas beaſts go, that is nothing; for by that reaſon ſwimming ſhould be ſwifter than running: and that kind of carriage alſo is not without labour of the wing.

*Experiment ſolitary touching the different clearneſs of the ſea.*

682. The ſea is clearer when the north wind bloweth, than when the ſouth wind. The cauſe is, for that ſalt water hath a little oilineſs in the ſurface thereof, as appeareth in very hot days: and again, for that the ſouthern wind relaxeth the water ſomewhat; and no water boiling is ſo clear as cold water.

*Experiment ſolitary touching the different heats of fire and boiling water.*

683. Fire burneth wood, making it firſt luminous; then black and brittle; and laſtly, broken and incinerate: ſcalding water doth none of theſe. The cauſe is, for that by fire the ſpirit of the body is firſt refined, and then emitted; whereof the refining or attenuation cauſeth the light; and the emiſſion, firſt the fragility, and after the diſſolution into aſhes; neither doth any other body enter: but in water the ſpirit of the body is not refined ſo much; and beſides part of the water entereth, which doth increaſe the ſpirit, and in a degree extinguiſh it: therefore we ſee that hot water will quench fire. And again we ſee, that in bodies wherein the water doth not much enter, but only the heat paſſeth, hot water worketh the effects of fire: As in eggs boiled and roaſted, (into which the water entereth not at all,) there is ſcarce difference to be diſcerned; but in fruit, and fleſh, whereinto the water entereth in ſome part, there is much more difference.

*Expe-*

*Experiment ſolitary touching the qualification of heat by moiſture.*

684. THE bottom of a veſſel of boiling water (as hath been obſerved) is not very much heated, ſo as men may put their hand under the veſſel and remove it. The cauſe is, for that the moiſture of water, as it quencheth coals where it entereth, ſo it doth allay heat where it toucheth: and therefore note well, that moiſture, although it doth not paſs through bodies, without communication of ſome ſubſtance, (as heat and cold do;) yet it worketh manifeſt effects; not by entrance of the body, but by qualifying of the heat and cold; as we ſee in this inſtance: and we ſee likewiſe, that the water of things diſtilled in water, (which they call the bath) differeth not much from the water of things diſtilled by fire. We ſee alſo, that pewter diſhes with water in them will not melt eaſily, but without it they will; nay we ſee more, that butter, or oil, which in themſelves are inflammable, yet by the virtue of their moiſture will do the like.

*Experiment ſolitary touching yawning.*

685. IT hath been noted by the ancients, that it is dangerous to pick one's ear whilſt he yawneth. The cauſe is, for that in yawning the inner parchment of the ear is extended, by the drawing in of the ſpirit and breath; for in yawning, and ſighing both, the ſpirit is firſt ſtrongly drawn in, and then ſtrongly expelled.

*Experiment ſolitary touching the hiccough.*

686. IT hath been obſerved by the ancients, that ſneezing doth ceaſe the hiccough. The cauſe is, for that the motion of the hiccough is a lifting up of the ſtomach, which ſneezing doth ſomewhat depreſs and divert the motion another way. For firſt we ſee that the hiccough cometh of fulneſs of meat, (eſpecially in children) which cauſeth an extenſion of the ſtomach: we ſee alſo it is cauſed by acid meats, or drinks, which is by the pricking of the ſtomach; and this motion is ceaſed either by diverſion, or by detention of the ſpirits; diverſion, as in ſneezing; detention, as we ſee holding of the breath doth help ſomewhat to ceaſe the hiccough; and putting a man into an earneſt ſtudy doth the like, as is commonly uſed: and vinegar put to the noſtrils, or gargarized, doth it alſo; for that it is aſtringent, and inhibiteth the motion of the ſpirit.

*Experiment ſolitary touching ſneezing.*

687. LOOKING againſt the ſun doth induce ſneezing. The cauſe is not the heating of the noſtrils, for then the holding up of the noſtrils againſt the ſun, though one wink, would do it; but the drawing down of the moiſture of the brain: for it will make the eyes run with water; and the drawing of moiſture to the eyes, doth draw it to the noſtrils by motion of conſent; and ſo followeth ſneezing: as contrariwiſe, the tickling of the noſtrils within, doth draw the moiſture to the noſtrils, and to the eyes by conſent; for they alſo will water. But yet it hath been obſerved, that if one be about to ſneeze, the rubbing of the eyes till they run with water, will prevent it. Whereof the cauſe is, for that the humour which was deſcending to the noſtrils, is diverted to the eyes.

*Experiment ſolitary touching the tenderneſs of the teeth.*

688. THE teeth are more by cold drink or the like affected than the other parts.

parts. The cauſe is double; the one, for that the reſiſtance of bone to cold is greater than of fleſh, for that the fleſh ſhrinketh, but the bone reſiſteth, whereby the cold becometh more eager: the other is, for that the teeth are parts without blood; whereas blood helpeth to qualify the cold; and therefore we ſee that the ſinews are much affected with cold, for that they are parts without blood; ſo the bones in ſharp colds wax brittle: and therefore it hath been ſeen, that all contuſions of bones in hard weather are more difficult to cure.

*Experiment ſolitary touching the tongue.*

689. It hath been noted, that the tongue receiveth more eaſily tokens of diſeaſes than the other parts; as of heats within, which appear moſt in the blackneſs of the tongue. Again, pyed cattle are ſpotted in their tongues, *&c.* The cauſe is, (no doubt) the tenderneſs of the part, which thereby receiveth more eaſily all alterations, than any other parts of the fleſh.

*Experiment ſolitary touching the taſte.*

690. When the mouth is out of taſte, it maketh things taſte ſometimes ſalt, chiefly bitter; and ſometimes loathſome, but never ſweet. The cauſe is, the corrupting of the moiſture about the tongue, which many times turneth bitter, and ſalt, and loathſome, but ſweet never; for the reſt are degrees of corruption.

*Experiment ſolitary touching ſome prognoſticks of peſtilential ſeaſons.*

691. It was obſerved in the great plague of the laſt year, that there were ſeen in divers ditches and low grounds about *London*, many toads, that had tails two or three inches long at the leaſt; whereas toads (uſually) have no tails at all. Which argueth a great diſpoſition to putrefaction in the ſoil and air. It is reported likewiſe, that roots, (ſuch as carrots and parſnips) are more ſweet and luſcious in infectious years, than in other years.

*Experiment ſolitary touching ſpecial ſimples for medicines.*

692. Wiſe phyſicians ſhould with all diligence enquire, what ſimples nature yieldeth, that have extreme ſubtile parts, without any mordication or acrimony: for they undermine that which is hard; they open that which is ſtopped and ſhut; and they expel that which is offenſive gently, without too much perturbation. Of this kind are elder-flowers; which therefore are proper for the ſtone: of this kind is the dwarf-pine; which is proper for the jaundice: of this kind is hartſhorn; which is proper for agues and infections; of this kind is piony; which is proper for ſtoppings in the head: of this kind is fumitory; which is proper for the ſpleen: and a number of others. Generally, divers creatures bred of putrefaction, though they be ſomewhat loathſome to take, are of this kind; as earth-worms, timber-ſows, ſnails, *&c.* And I conceive that the trochiſks of vipers, (which are ſo much magnified) and the fleſh of ſnakes ſome ways condited, and corrected, (which of late are grown into ſome credit) are of the ſame nature. So the parts of beaſts putrefied, (as *caſtoreum* and muſk, which have extream ſubtile parts) are to be placed amongſt them. We ſee alſo, that putrefaction of plants, as agarick and *Jews*-ear, are of greateſt virtue. The cauſe is, for that putrefaction is the ſubtileſt of all motions in the parts of bodies: and ſince we cannot take down the lives of living creatures, which ſome of the *Paracelſians* ſay (if

(if they could be taken down) would make us immortal: the next is for ſubtilty of operation, to take bodies putrefied; ſuch as may be ſafely taken.

*Experiments in conſort touching* Venus.

693. IT hath been obſerved by the ancients, that much uſe of *Venus* doth dim the ſight; and yet eunuchs, which are unable to generate, are (nevertheleſs) alſo dim-ſighted. The cauſe of dimneſs of ſight in the former, is the expence of ſpirits; in the latter, the over-moiſture of the brain: for the over-moiſture of the brain doth thicken the ſpirits viſual, and obſtructeth their paſſages; as we ſee by the decay in the ſight in age; where alſo the diminution of the ſpirits concurreth as another cauſe: we ſee alſo that blindneſs cometh by rheums and cataracts. Now in eunuchs, there are all the notes of moiſture; as the ſwelling of their thighs, the looſeneſs of their belly, the ſmoothneſs of their ſkin, *&c.*

694. THE pleaſure in the act of *Venus*, is the greateſt of all the pleaſures of the ſenſes; the matching of it with itch is improper, though that alſo be pleaſing to the touch. But the cauſes are profound. Firſt, all the organs of the ſenſes qualify the motions of the ſpirits; and make ſo many ſeveral ſpecies of motions, and pleaſures or diſpleaſures thereupon, as there be diverſities of organs. The inſtruments of ſight, hearing, taſte and ſmell, are of ſeveral frame; and ſo are the parts for generation. Therefore *Scaliger* doth well to make the pleaſure of generation a ſixth ſenſe; and if there were any other differing organs, and qualified perforations for the ſpirits to paſs, there would be more than the five ſenſes: neither do we well know, whether ſome beaſts and birds have not ſenſes that we know not; and the very ſcent of dogs is almoſt a ſenſe by itſelf. Secondly, the pleaſures of the touch, are greater and deeper than thoſe of the other ſenſes; as we ſee in warming upon cold; or refrigeration upon heat: for as the pains of the touch, are greater than the offences of other ſenſes; ſo likewiſe are the pleaſures. It is true, that the affecting of the ſpirits immediately, and (as it were) without an organ, is of the greateſt pleaſure; which is but in two things: ſweet ſmells; and wine, and the like ſweet vapours. For ſmells, we ſee their great and ſudden effect in fetching men again when they ſwoon: for drink, it is certain that the pleaſure of drunkenneſs is next the pleaſure of *Venus*; and great joys (likewiſe) make the ſpirits move and touch themſelves: and the pleaſure of *Venus* is ſomewhat of the ſame kind.

695. IT hath been always obſerved, that men are more inclined to *Venus* in the winter, and women in the ſummer. The cauſe is, for that the ſpirits, in a body more hot and dry, (as the ſpirits of men are) by the ſummer are more exhaled and diſſipated; and in the winter more condenſed and kept entire: but in bodies that are cold and moiſt, (as women's are) the ſummer doth cheriſh the ſpirits, and calleth them forth; the winter doth dull them. Furthermore, the abſtinence, or intermiſſion of the uſe of *Venus* in moiſt and well habituate bodies, breedeth a number of diſeaſes; and eſpecially dangerous impoſtumations. The reaſon is evident; for that it is a principal evacuation, eſpecially of the ſpirits: for of the ſpirits, there is ſcarce any evacuation, but in *Venus* and exerciſe. And therefore the omiſſion of either of them breedeth all diſeaſes of repletion.

*Experiments in conſort touching the* inſecta.

The nature of vivification is very worthy the enquiry: and as the nature of things is commonly better perceived in ſmall than in great; and in im-

perfect, than in perfect; and in parts, than in whole: ſo the nature of vivification is beſt enquired in creatures bred of putrefaction. The contemplation whereof hath many excellent fruits. Firſt, in diſcloſing the original of vivification. Secondly, in diſcloſing the original of figuration. Thirdly, in diſcloſing many things in the nature of perfect creatures, which in them lie more hidden. And fourthly, in traducing, by way of operation, ſome obſervations in the *inſecta*, to work effects upon perfect creatures. Note, that the word *inſecta* agreeth not with the matter, but we ever uſe it for brevity's ſake, intending by it creatures bred of putrefaction.

696. The *inſecta* are found to breed out of ſeveral matters: ſome breed of mud or dung; as the earth-worms, eels, ſnakes, *&c.* For they are both putrefactions: for water in mud doth putrefy, as not able to preſerve it ſelf: and for dung, all excrements are the refuſe and putrefactions of nouriſhment. Some breed in wood, both growing and cut down. *Quaere*, in what woods moſt, and at what ſeaſons? We ſee that the worms with many feet, which round themſelves into balls, are bred chiefly under logs of timber, but not in the timber; and they are ſaid to be found alſo (many times) in gardens, where no logs are. But it ſeemeth their generation requireth a coverture, both from ſun, and rain or dew; as the timber is; and therefore they are not venomous, but (contrariwiſe) are held by the phyſicians to clarify the blood. It is obſerved alſo, that *cimices* are found in the holes of bed ſides. Some breed in the hair of living creatures; as lice and tikes; which are bred by the ſweat cloſe kept, and ſomewhat arefied by the hair. The excrements of living creatures do not only breed *inſecta* when they are excerned, but alſo while they are in the body; as in worms whereto children are moſt ſubject, and are chiefly in the guts. And it hath been lately obſerved by phyſicians, that in many peſtilent diſeaſes, there are worms found in the upper parts of the body, where excrements are not, but only humours putrefied. Fleas breed principally of ſtraw or mats, where there hath been a little moiſture; or the chamber and bed-ſtraw kept cloſe, and not aired. It is received, that they are killed by ſtrewing wormwood in the rooms. And it is truly obſerved, that bitter things are apt rather to kill, than engender putrefaction; and they be things that are fat or ſweet, that are apteſt to putrefy. There is a worm that breedeth in meal, of the ſhape of a large white maggot, which is given as a great dainty to nightingales. The moth breedeth upon cloth, and other lanifices; eſpecially if they be laid up dankiſh and wet. It delighteth to be about the flame of a candle. There is a worm called a wevil, bred under ground, and that feedeth upon roots; as parſnips, carrots, *&c.* Some breed in waters, eſpecially ſhaded, but they muſt be ſtanding waters; as the water ſpider that hath ſix legs. The fly called the gad-fly, breedeth of ſomewhat that ſwimmeth upon the top of the water, and is moſt about ponds. There is a worm that breedeth of the dregs of wine decayed; which afterwards (as is obſerved by ſome of the ancients) turneth into a gnat. It hath been obſerved by the ancients, that there is a worm that breedeth in old ſnow, and is of colour reddiſh, and dull of motion, and dieth ſoon after it cometh out of ſnow. Which ſhould ſhew, that ſnow hath in it a ſecret warmth; for elſe it could hardly vivify. And the reaſon of the dying of the worm, may be the ſudden exhaling of that little ſpirit, as ſoon as it cometh out of the cold, which had ſhut it in. For as butterflies quicken with heat, which were benumbed with cold; ſo ſpirits may exhale with heat, which were preſerved in cold. It is affirmed both by the ancient and modern obſervation, that in furnaces of copper and braſs, where

where *chalcites* (which is vitriol) is often caſt in to mend the working, there riſeth ſuddenly a fly, which ſometimes moveth as if it took hold on the walls of the furnace; ſometimes is ſeen moving in the fire below; and dieth preſently as ſoon as it is out of the furnace: which is a noble inſtance, and worthy to be weighed; for it ſheweth, that as well violent heat of fire, as the gentle heat of living creatures, will vivify, if it have matter proportionable. Now the great axiom of vivification is, that there muſt be heat to dilate the ſpirit of the body; an active ſpirit to be dilated; matter viſcous or tenacious to hold in the ſpirit; and that matter to be put forth and figured. Now a ſpirit dilated by ſo ardent a fire as that of the furnace, as ſoon as ever it cooleth never ſo little, congealeth preſently. And (no doubt) this action is furthered by the *chalcites*, which hath a ſpirit that will put forth and germinate, as we ſee in chymical trials. Briefly, moſt things putrefied bring forth *inſecta* of ſeveral names; but we will not take upon us now to enumerate them all.

697. THE *inſecta* have been noted by the ancients to feed little: but this hath not been diligently obſerved; for graſhoppers eat up the green of whole countries; and ſilk-worms devour leaves ſwiftly; and ants make great proviſion. It is true, that creatures that ſleep and reſt much eat little; as dormice, and bats, *&c.* they are all without blood: which may be, for that the juice of their bodies is almoſt all one; not blood, and fleſh, and ſkin, and bone, as in perfect creatures; the integral parts have extreme variety, but the ſimilar parts little. It is true, that they have (ſome of them) a diaphragm and an inteſtine; and they have all ſkins; which in moſt of the *inſecta* are caſt off. They are not (generally) of long life: yet bees have been known to live ſeven years: and ſnakes are thought, the rather for the caſting of their ſpoil, to live till they be old: and eels, which many times breed of putrefaction, will live and grow very long: and thoſe that interchange from worms to flies in the ſummer, and from flies to worms in the winter, have been kept in boxes four years at the leaſt. Yet there are certain flies that are called *ephemera* that live but a day. The cauſe is the exility of the ſpirit, or perhaps the abſence of the ſun; for that if they were brought in, or kept cloſe, they might live longer. Many of the *inſecta*, (as butterflies, and other flies) revive eaſily when they ſeem dead, being brought to the ſun, or fire. The cauſe whereof is the diffuſion of the vital ſpirit, and eaſy dilating of it by a little heat. They ſtir a good while after their heads are off, or that they be cut in pieces; which is cauſed alſo, for that their vital ſpirits are more diffuſed throughout all their parts, and leſs confined to organs than in perfect creatures.

698. THE *inſecta* have voluntary motion, and therefore imagination; and whereas ſome of the ancients have ſaid that their motion is indeterminate, and their imagination indefinite, it is negligently obſerved; for ants go right forwards to their hills; and bees do (admirably) know the way from a flowery heath two or three miles off to their hives. It may be, gnats and flies have their imagination more mutable and giddy, as ſmall birds likewiſe have. It is ſaid by ſome of the ancients, that they have only the ſenſe of feeling, which is manifeſtly untrue; for if they go forth-right to a place, they muſt needs have ſight; beſides, they delight more in one flower or herb than in another, and therefore have taſte: and bees are called with ſound upon braſs, and therefore they have hearing; which ſheweth likewiſe, that though their ſpirit be diffuſed, yet there is a ſeat of their ſenſes in their head.

Other obſervations concerning the *inſecta*, together with the enumeration of them, we refer to that place, where we mean to handle the title of animals in general.

*Experiment ſolitary touching leaping.*

699. A man leapeth better with weights in his hands than without. The cauſe is, for that the weight (if it be proportionable) ſtrengtheneth the ſinews by contracting them. For otherwiſe, where no contraction is needful, weight hindereth. As we ſee in horſe-races, men are curious to foreſee that there be not the leaſt weight upon the one horſe more than upon the other. In leaping with weights the arms are firſt caſt backwards, and then forwards, with ſo much the greater force; for the hands go backward before they take their riſe. *Quaere*, if the contrary motion of the ſpirits, immediately before the motion we intend, doth not cauſe the ſpirits as it were to break forth with more force? as breath alſo drawn and kept in, cometh forth more forcibly: and in caſting of any thing, the arms, to make a greater ſwing, are firſt caſt backward.

*Experiment ſolitary touching the pleaſures and diſpleaſures of the ſenſes, eſpecially of hearing.*

700. Of muſical tones and unequal ſounds we have ſpoken before; but touching the pleaſure and diſpleaſure of the ſenſes, not ſo fully. Harſh ſounds, as of a ſaw when it is ſharpen'd; grinding of one ſtone againſt another; ſqueaking or ſhrieking noiſe; make a ſhivering or horror in the body, and ſet the teeth on edge. The cauſe is, for that the objects of the ear do affect the ſpirits (immediately) moſt with pleaſure and offence. We ſee there is no colour that affecteth the eye much with diſpleaſure: there be ſights that are horrible, becauſe they excite the memory of things that are odious, or fearful; but the ſame things painted do little affect. As for ſmells, taſtes and touches, they be things that do affect by a participation, or impulſion of the body of the object. So it is ſound alone that doth immediately and incorporeally affect moſt; this is moſt manifeſt in muſick, and concords and diſcords in muſick: for all ſounds, whether they be ſharp or flat, if they be ſweet, have a roundneſs and equality; and if they be harſh, are unequal: for a diſcord it ſelf is but a harſhneſs of divers ſounds meeting. It is true, that inequality not ſtayed upon, but paſſing, is rather an encreaſe of ſweetneſs; as in the purling of a wreathed ſtring; and in the raucity of a trumpet; and in the nightingale-pipe of a regal; and in a diſcord ſtraight falling upon a concord; but if you ſtay upon it, it is offenſive: and therefore there be theſe three degrees of pleaſing and diſpleaſing in ſounds, ſweet ſounds, diſcords, and harſh ſounds, which we call by divers names, as ſhrieking or grating, ſuch as we now ſpeak of. As for the ſetting of the teeth on edge, we plainly ſee what an intercourſe there is between the teeth and the organ of the hearing, by the taking of the end of a bow between the teeth, and ſtriking upon the ſtring. 2

# NATURAL HISTORY.

## CENT. VIII.

*Experiment ſolitary touching veins of medicinal earth.*

701. THERE be minerals and foſſils in great variety; but of veins of earth medicinal, but few: the chief are, *terra lemnia*, *terra ſigillata communis*, and *bolus armenus*; whereof *terra lemnia* is the chief. The virtues of them are, for curing of wounds, ſtanching of blood, ſtopping of fluxes, and rheums, and arreſting the ſpreading of poiſon, infection, and putrefaction: and they have of all other ſimples the perfecteſt and pureſt quality of drying, with little or no mixture of any other quality. Yet it is true, that the bole-armoniack is the moſt cold of them; and that *terra lemnia*, is the moſt hot; for which cauſe the iſland *Lemnos*, where it is digged, was in the old fabulous ages conſecrated to *Vulcan*.

*Experiment ſolitary touching the growth of ſponges.*

702. ABOUT the bottom of the *Streights* are gathered great quantities of ſponges, which are gathered from the ſides of rocks, being as it were a large but tough moſs. It is the more to be noted, becauſe that there be but few ſubſtances, plant-like, that grow deep within the ſea; for they are gathered ſometimes fifteen fathom deep: and when they are laid on ſhore, they ſeem to be of great bulk; but cruſhed together, will be tranſported in a very ſmall room.

*Experiment ſolitary touching ſea-fiſh put in freſh waters.*

703. IT ſeemeth, that fiſh that are uſed to the ſalt water, do nevertheleſs delight more in freſh. We ſee, that ſalmons and ſmelts love to get into rivers, though it be againſt the ſtream. At the haven of *Conſtantinople* you ſhall have great quantities of fiſh that come from the *Euxine* ſea, that when they come into the freſh water, do inebriate and turn up their bellies, ſo as you may take them with your hand. I doubt there hath not been ſufficient experiment made of putting ſea-fiſh into freſh water, ponds, and pools. It is a thing of great uſe and pleaſure; for ſo you may have them new at ſome good diſtance from the ſea: and beſides, it may be, the fiſh will eat the pleaſanter, and may fall to breed. And it is ſaid, that *Colcheſter* oiſters, which are put into pits, where the ſea goeth and cometh, (but yet ſo, that there

there is freſh water coming alſo to them when the ſea voideth,) become by that means fatter, and more grown.

*Experiment ſolitary touching attraction by ſimilitude of ſubſtance.*

704. The *Turkiſh* bow giveth a very forcible ſhoot; inſomuch as it hath been known, that the arrow hath pierced a ſteel target, or a piece of braſs of two inches thick: but that which is more ſtrange, the arrow, if it be headed with wood, hath been known to pierce through a piece of wood of eight inches thick. And it is certain, that we had in uſe at one time, for ſea fight, ſhort arrows, which they called ſprights, without any other heads, ſave wood ſharpened; which were diſcharged out of muſkets, and would pierce through the ſides of ſhips where a bullet would not pierce. But this dependeth upon one of the greateſt ſecrets in all nature; which is, that ſimilitude of ſubſtance will cauſe attraction, where the body is wholly freed from the motion of gravity: for if that were taken away, lead would draw lead, and gold would draw gold, and iron would draw iron, without the help of the load-ſtone. But this ſame motion of weight or gravity, (which is a mere motion of the matter, and hath no affinity with the form, or kind,) doth kill the other motion, except it ſelf be killed by a violent motion, as in theſe inſtances of arrows; for then the motion of attraction by ſimilitude of ſubſtance beginneth to ſhew it ſelf. But we ſhall handle this point of nature fully in due place.

*Experiment ſolitary touching certain drinks in* Turkey.

705. They have in *Turkey* and the eaſt certain confections, which they call ſervets, which are like to candied conſerves, and are made of ſugar and lemons, or ſugar and citrons, or ſugar and violets, and ſome other flowers; and ſome mixture of amber for the more delicate perſons; and thoſe they diſſolve in water, and thereof make their drink, becauſe they are forbidden wine by their law. But I do much marvel, that no *Engliſhman*, or *Dutchman*, or *German*, doth ſet up brewing in *Conſtantinople*; conſidering they have ſuch quantity of barley. For as for the general ſort of men, frugality may be the cauſe of drinking water; for that is no ſmall ſaving, to pay nothing for one's drink; but the better ſort might well be at the coſt. And yet I wonder the leſs at it, becauſe I ſee *France*, *Italy*, or *Spain*, have not taken into uſe beer or ale; which (perhaps) if they did, would better both their healths and their complexion. It is likely it would be matter of great gain to any that ſhould begin it in *Turkey*.

*Experiments in conſort touching ſweat.*

706. In bathing in hot water, ſweat (nevertheleſs) cometh not in the parts under the water. The cauſe is; firſt, for that ſweat is a kind of colliquation; and that kind of colliquation is not made either by an over dry heat, or an over moiſt heat: for over moiſture doth ſomewhat extinguiſh the heat, as we ſee that even hot water quencheth fire, and over dry heat ſhutteth the pores: and therefore men will ſooner ſweat covered before the ſun, or fire, than if they ſtood naked: and earthen bottles, filled with hot water, do provoke in bed a ſweat more daintily than brick-bats hot. Secondly, hot water doth cauſe evaporation from the ſkin; ſo as it ſpendeth the matter in thoſe parts under the water, before it iſſueth in ſweat. Again, ſweat cometh more plentifully, if the heat be encreaſed by degrees, than if it be greateſt at firſt, or equal. The cauſe is, for that the pores are better

better opened by a gentle heat, than by a more violent; and by their opening, the ſweat iſſueth more abundantly. And therefore phyſicians may do well when they provoke ſweat in bed by bottles, with a decoction of ſudorifick herbs in hot water, to make two degrees of heat in the bottles; and to lay in the bed the leſs heated firſt, and after half an hour, the more heated.

707. SWEAT is ſalt in taſte; the cauſe is, for that that part of the nouriſhment which is freſh and ſweet, turneth into blood and fleſh; and the ſweat is only that part which is ſeparate and excerned. Blood alſo raw hath ſome ſaltneſs more than fleſh; becauſe the aſſimilation into fleſh is not without a little and ſubtile excretion from the blood.

708. SWEAT cometh forth more out of the upper parts of the body than the lower; the reaſon is, becauſe thoſe parts are more repleniſhed with ſpirits; and the ſpirits are they that put forth ſweat: beſides, they are leſs fleſhy, and ſweat iſſueth (chiefly) out of the parts that are leſs fleſhy, and more dry; as the forehead and breaſt.

709. MEN ſweat more in ſleep than waking; and yet ſleep doth rather ſtay other fluxions, than cauſe them; as rheums, looſeneſs of the body, *&c.* The cauſe is, for that in ſleep the heat and ſpirits do naturally move inwards, and there reſt. But when they are collected once within, the heat becometh more violent and irritate; and thereby expelleth ſweat.

710. COLD ſweats are (many times) mortal, and near death; and always ill, and ſuſpected; as in great fears, hypochondriacal paſſions, *&c.* The cauſe, for that cold ſweats come by a relaxation or forſaking of the ſpirits, whereby the moiſture of the body, which heat did keep firm in the parts, ſevereth and iſſueth out.

711. IN thoſe diſeaſes which cannot be diſcharged by ſweat, ſweat is ill, and rather to be ſtayed; as in diſeaſes of the lungs, and fluxes of the belly: but in thoſe diſeaſes which are expelled by ſweat, it eaſeth and lighteneth; as in agues, peſtilences, *&c.* The cauſe is, for that ſweat in the later ſort is partly critical, and ſendeth forth the matter that offendeth; but in the former, it either proceedeth from the labour of the ſpirits, which ſheweth them oppreſſed; or from motion of conſent, when nature not able to expel the diſeaſe where it is ſeated, moveth to an expulſion indifferent over all the body.

*Experiment ſolitary touching the glow-worm.*

712. THE nature of the glow-worm is hitherto not well obſerved. Thus much we ſee; that they breed chiefly in the hotteſt months of ſummer; and that they breed not in champain, but in buſhes and hedges. Whereby it may be conceived, that the ſpirit of them is very fine, and not to be refined but by ſummer heats: and again, that by reaſon of the fineneſs, it doth eaſily exhale. In *Italy*, and the hotter countries, there is a fly they call *Lucciole*, that ſhineth as the glow-worm doth; and it may be is the flying glow-worm. But that fly is chiefly upon fens and marſhes. But yet the two former obſervations hold; for they are not ſeen but in the heat of ſummer; and ſedge, or other green of the fens, give as good ſhade as buſhes. It may be the glow-worms of the cold countries, ripen not ſo far as to be winged.

*Experiments in conſort touching the impreſſions, which the paſſions of the mind make upon the body.*

713. THE paſſions of the mind work upon the body the impreſſions following.

lowing. Fear cauſeth paleneſs; trembling; the ſtanding of the hair upright; ſtarting; and ſcrieching. The paleneſs is cauſed, for that the blood runneth inward to ſuccour the heart. The trembling is cauſed, for that through the flight of the ſpirits inward, the outward parts are deſtituted, and not ſuſtained. Standing upright of the hair is cauſed, for that by ſhutting of the pores of the ſkin, the hair that lieth aſlope muſt needs riſe. Starting is both an apprehenſion of the thing feared; (and in that kind it is a motion of ſhrinking;) and likewiſe an inquiſition in the beginning, what the matter ſhould be; (and in that kind it is a motion of erection:) and therefore when a man would liſten ſuddenly to any thing, he ſtarteth; for the ſtarting is an erection of the ſpirits to attend. Scrieching is an appetite of expelling that which ſuddenly ſtriketh the ſpirits: for it muſt be noted, that many motions, though they be unprofitable to expel that which hurteth, yet they are offers of nature, and cauſe motions by conſent; as in groaning, or crying upon pain.

714. GRIEF and pain cauſe ſighing, ſobbing, groaning, ſcreaming, and roaring; tears, diſtorting of the face, grinding of the teeth, ſweating. Sighing is cauſed by the drawing in of a greater quantity of breath to refreſh the heart that laboureth: like a great draught when one is thirſty. Sobbing is the ſame thing ſtronger. Groaning, and ſcreaming, and roaring, are cauſed by an appetite of expulſion, as hath been ſaid: for when the ſpirits cannot expel the thing that hurteth, in their ſtrife to do it, by motion of conſent, they expel the voice. And this is when the ſpirits yield, and give over to reſiſt; for if one do conſtantly reſiſt pain, he will not groan. Tears are cauſed by a contraction of the ſpirits of the brain; which contraction by conſequence aſtringeth the moiſture of the brain, and thereby ſendeth tears into the eyes. And this contraction, or compreſſion, cauſeth alſo wringing of the hands; for wringing is a geſture of expreſſion of moiſture. The diſtorting of the face is cauſed by a contention, firſt to bear and reſiſt, and then to expel; which maketh the parts knit firſt, and afterwards open. Grinding of the teeth is cauſed (likewiſe) by a gathering and ſerring of the ſpirits together to reſiſt; which maketh the teeth alſo to ſet hard one againſt another. Sweating is alſo a compound motion, by the labour of the ſpirits, firſt to reſiſt, and then to expel.

715. JOY cauſeth a cheerfulneſs and vigour in the eyes; ſinging, leaping, dancing, and ſometimes tears. All theſe are the effects of the dilatation, and coming forth of the ſpirits into the outward parts; which maketh them more lively and ſtirring. We know it hath been ſeen, that exceſſive ſudden joy hath cauſed preſent death, while the ſpirits did ſpread ſo much as they could not retire again. As for tears, they are the effects of compreſſion of the moiſture of the brain, upon dilatation of the ſpirits. For compreſſion of the ſpirits worketh an expreſſion of the moiſture of the brain by conſent, as hath been ſaid in grief. But then in joy, it worketh it diverſly; *viz.* by propulſion of the moiſture, when the ſpirits dilate, and occupy more room.

716. ANGER cauſeth paleneſs in ſome, and the going and the coming of the colour in others: alſo trembling in ſome; ſwelling, foaming at the mouth, ſtamping, bending of the fiſt. Paleneſs, and going and coming of the colour, are cauſed by the burning of the ſpirits about the heart; which to refreſh themſelves, call in more ſpirits from the outward parts. And if the paleneſs be alone, without ſending forth the colour again, it is commonly joined with ſome fear; but in many there is no paleneſs at all, but contra-

contrariwiſe redneſs about the cheeks and gills; which is by the ſending forth of the ſpirits in an appetite to revenge. Trembling in anger is likewiſe by a calling in of the ſpirits; and is commonly when anger is joined with fear. Swelling is cauſed, both by a dilatation of the ſpirits by over-heating, and by a liquefaction or boiling of the humours thereupon. Foaming at the mouth is from the ſame cauſe, being an ebullition: ſtamping, and bending of the fiſt, are cauſed by an imagination of the act of revenge.

717. LIGHT diſpleaſure or diſlike, cauſeth ſhaking of the head, frowning and knitting of the brows. Theſe effects ariſe from the ſame cauſes that trembling and horror do; namely, from the retiring of the ſpirits, but in a leſs degree. For the ſhaking of the head is but a ſlow and definite trembling; and is a geſture of ſlight refuſal: and we ſee alſo, that a diſlike cauſeth (often) that geſture of the hand, which we uſe when we refuſe a thing, or warn it away. The frowning and knitting of the brows, is a gathering, or ſerring of the ſpirits, to reſiſt in ſome meaſure. And we ſee alſo this knitting of the brows will follow upon earneſt ſtudying, or cogitation of any thing, though it be without diſlike.

718. SHAME cauſeth bluſhing, and caſting down of the eyes. Bluſhing is the reſort of blood to the face; which in the paſſion of ſhame is the part that laboureth moſt. And although the bluſhing will be ſeen in the whole breaſt if it be naked, yet that is but in paſſage to the face. As for the caſting down of the eyes, it proceedeth of the reverence a man beareth to other men; whereby, when he is aſhamed, he cannot endure to look firmly upon others: and we ſee, that bluſhing, and the caſting down of the eyes both, are more when we come before many; *ore Pompeii quid mollius? nunquam non coram pluribus erubuit:* and likewiſe when we come before great or reverend perſons.

719. PITY cauſeth ſometimes tears; and a flexion or caſt of the eye aſide. Tears come from the ſame cauſe that they do in grief: for pity is but grief in another's behalf. The caſt of the eye is a geſture of averſion, or lothneſs to behold the object of pity.

720. WONDER cauſeth aſtoniſhment, or an immoveable poſture of the body; caſting up of the eyes to heaven; and lifting up of the hands. For aſtoniſhment, it is cauſed by the fixing of the mind upon one object of cogitation, whereby it doth not ſpatiate and tranſcur, as it uſeth; for in wonder the ſpirits fly not as in fear; but only ſettle, and are made leſs apt to move. As for the caſting up of the eyes, and lifting up of the hands, it is a kind of appeal to the Deity, which is the author, by power and providence, of ſtrange wonders.

721. LAUGHING cauſeth a dilatation of the mouth and lips; a continued expulſion of the breath, with the loud noiſe, which maketh the interjection of laughing; ſhaking of the breaſt and ſides: running of the eyes with water, if it be violent and continued. Wherein firſt it is to be underſtood, that laughing is ſcarce (properly) a paſſion, but hath its ſource from the intellect; for in laughing there ever precedeth a conceit of ſomewhat ridiculous. And therefore it is proper to man. Secondly, that the cauſe of laughing is but a light touch of the ſpirits, and not ſo deep an impreſſion as in other paſſions. And therefore (that which hath no affinity with the paſſions of the mind) it is moved, and that in great vehemency, only by tickling ſome parts of the body: and we ſee that men even in a grieved ſtate of mind, yet cannot ſometimes forbear laughing. Thirdly, it is ever joined with ſome degree of delight: and therefore exhilaration hath ſome affinity with joy, though it

be a much lighter motion: *res severa est verum gaudium.* Fourthly, that the object of it is deformity, absurdity, shrewd turns, and the like. Now to speak of the causes of the effects before mentioned, whereunto these general notes give some light. For the dilatation of the mouth and lips, continued expulsion of the breath and voice, and shaking of the breast and sides, they proceed (all) from the dilatation of the spirits; especially being sudden. So likewise, the running of the eyes with water, (as hath been formerly touched, where we spake of the tears of joy and grief) is an effect of dilatation of the spirits. And for suddenness, it is a great part of the matter: for we see, that any shrewd turn that lighteth upon another; or any deformity, *&c.* moveth laughter in the instant; which after a little time it doth not. So we cannot laugh at any thing after it is stale, but whilst it is new: and even in tickling, if you tickle the sides, and give warning; or give a hard or continued touch, it doth not move laughter so much.

722. Lust causeth a flagrancy in the eyes, and priapism. The cause of both these is, for that in lust, the sight and the touch are the things desired; and therefore the spirits resort to those parts which are most affected. And note well in general, (for that great use may be made of the observation) that (evermore) the spirits, in all passions, resort most to the parts that labour most, or are most affected. As in the last which hath been mentioned, they resort to the eyes and venereous parts: in fear and anger to the heart: in shame to the face: and in light dislikes to the head.

*Experiments in consort touching drunkenness.*

723. It hath been observed by the ancients, and is yet believed, that the sperm of drunken men is unfruitful. The cause is, for that it is over-moistened, and wanteth spissitude: And we have a merry saying, that they that go drunk to bed get daughters.

724. Drunken men are taken with a plain defect, or destitution in voluntary motion. They reel; they tremble; they cannot stand, nor speak strongly. The cause is, for that the spirits of the wine oppress the spirits animal, and occupate part of the place where they are; and so make them weak to move. And therefore drunken men are apt to fall asleep: and opiates, and stupefactives, (as poppy, henbane, hemlock, *&c.*) induce a kind of drunkenness by the grossness of their vapour; as wine doth by the quantity of the vapour. Besides, they rob the spirits animal of their matter, whereby they are nourished: for the spirits of the wine prey upon it as well as they: and so they make the spirits less supple and apt to move.

725. Drunken men imagine every thing turneth round; they imagine also that things come upon them; they see not well things afar off; those things that they see near hand, they see out of their place; and (sometimes) they see things double. The cause of the imagination that things turn round, is, for that the spirits themselves turn, being compressed by the vapour of the wine; (for any liquid body upon compression, turneth, as we see in water:) and it is all one to the sight, whether the visual spirits move, or the object moveth, or the medium moveth. And we see that long turning round breedeth the same imagination. The cause of the imagination that things come upon them is, for that the spirits visual themselves draw back; which maketh the object seem to come on; and besides, when they see things turn round, and move, fear maketh them think they come upon them. The cause that they cannot see things afar off, is the weakness of the spirits; for in every megrim, or *vertigo*, there is an obtenebration joined with a semblance

blance of turning round; which we ſee alſo in the lighter ſort of ſwoonings. The cauſe of ſeeing things out of their place, is the refraction of the ſpirits viſual; for the vapour is as an unequal medium; and it is as the ſight of things out of place in water. The cauſe of ſeeing things double, is, the ſwift and unquiet motion of the ſpirit, (being oppreſſed) to and fro; for, (as was ſaid before) the motion of the ſpirits viſual, and the motion of the object, make the ſame appearances; and for the ſwift motion of the object, we ſee, that if you fillip a lute-ſtring, it ſheweth double or treble.

726. MEN are ſooner drunk with ſmall draughts than with great. And again, wine ſugar'd inebrateth leſs than wine pure. The cauſe of the former is, for that the wine deſcendeth not ſo faſt to the bottom of the ſtomach, but maketh longer ſtay in the upper part of the ſtomach, and ſendeth vapours faſter to the head; and therefore inebrateth ſooner. And for the ſame reaſon, ſops in wine, (quantity for quantity) inebriate more than wine of it ſelf. The cauſe of the latter is, for that the ſugar doth inſpiſſate the ſpirits of the wine, and maketh them not ſo eaſy to reſolve into vapour. Nay farther, it is thought to be ſome remedy againſt inebriating, if wine ſugar'd be taken after wine pure. And the ſame effect is wrought either by oil, or milk, taken upon much drinking.

*Experiment ſolitary touching the help or hurt of wine, tho' moderately uſed.*

727. THE uſe of wine in dry and conſumed bodies is hurtful; in moiſt and full bodies it is good. The cauſe is, for that the ſpirits of the wine do prey upon the dew or radical moiſture (as they term it) of the body, and ſo deceive the animal ſpirits. But where there is moiſture enough, or ſuperfluous, there wine helpeth to digeſt, and deſiccate the moiſture.

*Experiments ſolitary touching caterpillars.*

728. THE caterpillar is one of the moſt general of worms, and breedeth of dew and leaves; for we ſee infinite number of caterpillars which breed upon trees and hedges, by which the leaves of the trees or hedges are in great part conſumed; as well by their breeding out of the leaf, as by their feeding upon the leaf. They breed in the ſpring chiefly, becauſe then there is both dew and leaf. And they breed commonly when the eaſt winds have much blown; the cauſe whereof is, the dryneſs of that wind; for to all vivification upon putrefaction, it is requiſite the matter be not too moiſt: and therefore we ſee they have cobwebs about them, which is a ſign of a ſlimy dryneſs; as we ſee upon the ground, whereupon, by dew and ſun, cobwebs breed all over. We ſee alſo the green caterpillar breedeth in the inward parts of roſes, eſpecially not blown, where the dew ſticketh; but eſpecially caterpillars, both the greateſt, and the moſt, breed upon cabbages, which have a fat leaf, and apt to putrefy. The caterpillar towards the end of ſummer waxeth volatile, and turneth to a butterfly, or perhaps ſome other fly. There is a caterpillar that hath a fur or down upon it, and ſeemeth to have affinity with the ſilk-worm.

*Experiment ſolitary touching the flies* cantharides.

729. The flies *cantharides* are bred of a worm, or caterpillar, but peculiar to certain fruit trees; as are the fig-tree, the pine-tree, and the wild briar; all which bear ſweet fruit, and fruit that hath a kind of ſecret biting or ſharpneſs: for the fig hath a milk in it, that is ſweet and corroſive; the pine-apple hath a kernel that is ſtrong and abſterſive: the fruit of the briar

is ſaid to make children, or thoſe that eat them, ſcabbed. And therefore, no marvel though *cantharides* have ſuch a corroſive and cauteriſing quality; for there is not one other of the *inſecta*, but is bred of a duller matter. The body of the *cantharides* is bright coloured; and it may be, that the delicate colour'd dragon-flies may have likewiſe ſome corroſive quality.

*Experiments in conſort touching laſſitude.*

730. LASSITUDE is remedied by bathing, or anointing with oil and warm water. The cauſe is, for that all laſſitude is a kind of contuſion, and compreſſion of the parts; and bathing and anointing, give a relaxation or emollition; and the mixture of oil and water, is better than either of them alone; becauſe water entereth better into the pores, and oil after entry ſoftneth better. It is found alſo, that the taking of tobacco doth help and diſcharge laſſitude. The reaſon whereof is, partly, becauſe by chearing or comforting of the ſpirits, it openeth the parts compreſſed or contuſed; and chiefly, becauſe it refreſheth the ſpirits by the opiate virtue thereof, and ſo diſchargeth wearineſs, as ſleep likewiſe doth.

731. IN going up a hill, the knees will be moſt weary; in going down a hill, the thighs. The cauſe is, for that in the lift of the feet, when a man goeth up the hill, the weight of the body beareth moſt upon the knees; and in going down the hill, upon the thighs.

*Experiment ſolitary touching the caſting of the skin and ſhell in ſome creatures.*

732. THE caſting of the ſkin is by the ancients compared to the breaking of the ſecundine, or caul, but not rightly; for that were to make every caſting of the ſkin a new birth: and beſides, the ſecundine is but a general cover, not ſhaped according to the parts, but the ſkin is ſhaped according to the parts. The creatures that caſt their ſkin are, the ſnake, the viper, the graſhopper, the lizard, the ſilk-worm, *&c.* Thoſe that caſt their ſhell are, the lobſter, the crab, the crawfiſh, the hodmandod or dodman, the tortoiſe, *&c.* The old ſkins are found, but the old ſhells never: ſo as it is like they ſcale off, and crumble away by degrees. And they are known by the extreme tenderneſs and ſoftneſs of the new ſhell, and ſomewhat by the freſhneſs of the colour of it. The cauſe of the caſting of ſkin and ſhell, ſhould ſeem to be the great quantity of matter in thoſe creatures that is fit to make ſkin or ſhell: and again, the looſeneſs of the ſkin or ſhell, that ſticketh not cloſe to the fleſh. For it is certain, that it is the new ſkin or ſhell that putteth off the old: ſo we ſee, that in deer it is the young horn that putteth off the old; and in birds, the young feathers put off the old: and ſo birds that have much matter for their beak, caſt their beaks, the new beak putting off the old.

*Experiments in conſort touching the poſtures of the body.*

733. LYING not erect, but hollow, which is in the making of the bed; or with the legs gathered up, which is in the poſture of the body, is the more wholeſome. The reaſon is, the better comforting of the ſtomach, which is by that leſs penſile: and we ſee that in weak ſtomachs, the laying up of the legs high, and the knees almoſt to the mouth, helpeth and comforteth. We ſee alſo that galley-ſlaves, notwithſtanding their miſery otherwiſe, are commonly fat and fleſhy; and the reaſon is, becauſe the ſtomach is ſupported ſomewhat in ſitting, and is penſile in ſtanding or going. And therefore, for prolongation of life, it is good to chuſe thoſe exerciſes where the limbs

limbs move more than the ſtomach and belly; as in rowing, and in ſawing, being ſet.

734. MEGRIMS and giddineſs are rather when we riſe after long ſitting, than while we ſit. The cauſe is, for that the vapours, which were gathered by ſitting, by the ſudden motion, fly more up into the head.

735. LEANING long upon any part maketh it numb, and, as we call it, aſleep. The cauſe is, for that the compreſſion of the part ſuffereth not the ſpirits to have free acceſs; and therefore when we come out of it, we feel a ſtinging or pricking, which is the re-entrance of the ſpirits.

*Experiment ſolitary touching peſtilential years.*

736. IT hath been noted, that thoſe years are peſtilential and unwholeſome, when there are great numbers of frogs, flies, locuſts, *&c.* The cauſe is plain; for that thoſe creatures being engender'd of putrefaction, when they abound, ſhew a general diſpoſition of the year, and conſtitution of the air to diſeaſes of putrefaction. And the ſame prognoſtick (as hath been ſaid before) holdeth, if you find worms in oak-apples: for the conſtitution of the air appeareth more ſubtilly in any of theſe things, than to the ſenſe of man.

*Experiment ſolitary touching the prognoſticks of hard winters.*

737. IT is an obſervation amongſt countrey people, that years of ſtore of haws and hips do commonly portend cold winters; and they aſcribe it to God's providence, that (as the ſcripture ſaith) reacheth even to the falling of a ſparrow; and much more is like to reach to the preſervation of birds in ſuch ſeaſons. The natural cauſe alſo may be the want of heat, and abundance of moiſture in the ſummer precedent; which putteth forth thoſe fruits, and muſt needs leave great quantity of cold vapours not diſſipated; which cauſeth the cold of the winter following.

*Experiment ſolitary touching medicines that condenſe and relieve the ſpirits.*

738. THEY have in *Turkey* a drink called coffee, made of a berry of the ſame name as black as ſoot, and of a ſtrong ſcent, but not aromatical; which they take, beaten into powder, in water, as hot as they can drink it: and they take it, and ſit at it in their coffee-houſes, which are like our taverns. This drink comforteth the brain and heart, and helpeth digeſtion. Certainly this berry-coffee, the root and leaf betle, the leaf tobacco, and the tear of poppey, (*opium*,) of which the *Turks* are great takers, (ſuppoſing it expelleth all fear,) do all condenſe the ſpirits, and make them ſtrong and aleger. But it ſeemeth they are taken after ſeveral manners; for coffee and *opium* are taken down, tobacco but in ſmoak, and betle is but champed in the mouth with a little lime. It is like there are more of them, if they were well found out, and well corrected. *Quaere* of henbane-ſeed; of mandrake; of ſaffron, root and flower; of *ſolium indicum*; of ambergreece; of the *Aſſyrian amomum*, if it may be had; and of the ſcarlet powder, which they call *kermes*; and (generally) of all ſuch things as do inebriate and provoke ſleep. Note, that tobacco is not taken in root or ſeed, which are more forcible ever than leaves.

*Experiment ſolitary touching paintings of the body.*

739 The *Turks* have a black powder made of a mineral called alcohole, which with a fine long pencil they lay under their eye-lids, which doth co-

lour

lour them black; whereby the white of the eye is ſet off more white. With the ſame powder they colour alſo the hairs of their eye-lids, and of their eye-brows, which they draw into embowed arches. You ſhall find that *Xenophon* maketh mention, that the *Medes* uſed to paint their eyes. The *Turks* uſe with the ſame tincture to colour the hair of their heads and beards black. And divers with us that are grown grey, and yet would appear young, find means to make their hair black, by combing it (as they ſay) with a leaden comb, or the like. As for the *Chineſes*, who are of an ill complexion, (being olivaſter) they paint their cheeks ſcarlet, eſpecially their king and grandees. Generally, barbarous people, that go naked, do not only paint themſelves, but they pounce and raiſe their ſkin, that the painting may not be taken forth, and make it into works. So do the *Weſt-Indians*; and ſo did the ancient *Picts* and *Britons*; ſo that it ſeemeth men would have the colours of birds feathers, if they could tell how; or at leaſt, they will have gay ſkins inſtead of gay clothes.

*Experiment ſolitary touching the uſe of bathing and anointing.*

740. It is ſtrange, that the uſe of bathing, as a part of diet, is left. With the *Romans* and the *Grecians* it was as uſual, as eating or ſleeping; and ſo is it amongſt the *Turks* at this day; whereas with us it remaineth but as a part of phyſick. I am of opinion, that the uſe of it, as it was with the *Romans*, was hurtful to health; for that it made the body ſoft, and eaſy to waſte. For the *Turks* it is more proper, becauſe of their drinking water and feeding upon rice, and other food of ſmall nouriſhment, maketh their bodies ſo ſolid and hard, as you need not fear that bathing ſhould make them frothy. Beſides, the *Turks* are great ſitters, and ſeldom walk; whereby they ſweat leſs, and need bathing more. But yet certain it is, that bathing, and eſpecially anointing, may be ſo uſed as it may be a great help to health, and prolongation of life. But hereof we ſhall ſpeak in due place, when we come to handle experiments medicinal.

*Experiment ſolitary touching chambletting of paper.*

741. The *Turks* have a pretty art of chambletting of paper, which is not with us in uſe. They take divers oiled papers, and put them ſeverally (in drops) upon water, and ſtir the water lightly, and then wet their paper (being of ſome thickneſs) with it, and the paper will be waved and veined, like chamblet or marble.

*Experiment ſolitary touching cuttle-ink.*

742. It is ſomewhat ſtrange, that the blood of all birds and beaſts, and fiſhes, ſhould be of a red colour, and only the blood of the cuttle ſhould be as black as ink. A man would think, that the cauſe ſhould be the high concoction of that blood; for we ſee in ordinary puddings, that the boiling turneth the blood to be black; and the cuttle is accounted a delicate meat, and is much in requeſt.

*Experiment ſolitary touching encreaſe of weight in earth.*

743. It is reported of credit, that if you take earth from land adjoining to the river of *Nile*, and preſerve it in that manner, that it neither come to be wet nor waſted; and weigh it daily, it will not alter weight until the ſeventeenth of *June*, which is the day when the river beginneth to riſe; and then it will grow more and more ponderous, till the river cometh to its

height. Which if it be true, it cannot be cauſed but by the air, which then beginneth to condenſe; and ſo turneth within that ſmall mould into a degree of moiſture, which produceth weight. So it hath been obſerved, that tobacco cut, and weighed, and then dried by the fire, loſeth weight; and after being laid in the open air, recovereth weight again. And it ſhould ſeem, that as ſoon as ever the river beginneth to encreaſe, the whole body of the air thereabouts ſuffereth a change: for (that which is more ſtrange) it is credibly affirmed, that upon that very day when the river firſt riſeth, great plagues in *Cairo* uſe ſuddenly to break up.

*Experiments in conſort touching ſleep.*

744. THOSE that are very cold, and eſpecially in their feet, cannot get to ſleep: the cauſe may be, for that in ſleep is required a free reſpiration, which cold doth ſhut in and hinder; for we ſee, that in great colds one can ſcarce draw his breath. Another cauſe may be, for that cold calleth the ſpirits to ſuccour; and therefore they cannot ſo well cloſe, and go together in the head; which is ever requiſite to ſleep. And for the ſame cauſe, pain and noiſe hinder ſleep; and darkneſs (contrariwiſe) furthereth ſleep.

745. SOME noiſes (whereof we ſpake in the hundred and twelfth experiment) help ſleep; as the blowing of the wind, the trickling of water, humming of bees, ſoft ſinging, reading, *&c.* The cauſe is, for that they move in the ſpirits a gentle attention; and whatſoever moveth attention without too much labour, ſtilleth the natural and diſcurſive motion of the ſpirits.

746. SLEEP nouriſheth, or at leaſt preſerveth bodies, a long time, without other nouriſhment. Beaſts that ſleep in winter (as it is noted of wild bears) during their ſleep wax very fat, though they eat nothing. Bats have been found in ovens, and other hollow cloſe places, matted one upon another; and therefore it is likely that they ſleep in the winter time, and eat nothing. *Quaere*, whether bees do not ſleep all winter, and ſpare their honey? Butterflies, and other flies, do not only ſleep, but lie as dead all winter; and yet with a little heat of ſun or fire, revive again. A dormouſe, both winter and ſummer, will ſleep ſome days together, and eat nothing.

*Experiments in conſort touching teeth and hard ſubſtances in the bodies of living creatures.*

TO reſtore teeth in age, were *magnale naturae.* It may be thought of. But howſoever, the nature of the teeth deſerveth to be enquired of, as well as the other parts of living creatures bodies.

747. THERE be five parts in the bodies of living creatures, that are of hard ſubſtance; the ſkull, the teeth, the bones, the horns, and the nails. The greateſt quantity of hard ſubſtance continued, is towards the head. For there is the ſkull of one entire bone; there are the teeth; there are the maxillary bones: there is the hard bone, that is the inſtrument of hearing; and thence iſſue the horns: ſo that the building of living creatures bodies, is like the building of a timber houſe, where the walls and other parts have columns and beams; but the roof is in the better ſort of houſes, all tile, or lead, or ſtone. As for birds, they have three other hard ſubſtances proper to them; the bill, which is of like matter with the teeth; for no birds have teeth: the ſhell of the egg; and their quills: for as for their ſpur, it is but a nail. But no living creatures, that have ſhells very hard, (as oiſters, cockles, muſcles, ſcallops, crabs, lobſters, craw-fiſh, ſhrimps, and eſpecially the tortoiſe) have bones within them, but only little griſtles.

748. BONES

748. BONES, after full growth, continue at a ſtay; and ſo doth the ſkull: horns, in ſome creatures, are caſt and renewed: teeth ſtand at a ſtay, except their wearing: as for nails, they grow continually: and bills and beaks will overgrow, and ſometimes be caſt; as in eagles and parrots.

749. Moſt of the hard ſubſtances fly to the extreams of the body: as ſkull, horns, teeth, nails, and beaks: only the bones are more inward, and clad with fleſh. As for the entrails, they are all without bones; ſave that a bone is (ſometimes) found in the heart of a ſtag; and it may be in ſome other creature.

750. THE ſkull hath brains, as a kind of marrow within it. The back-bone hath one kind of marrow, which hath an affinity with the brain; and other bones of the body have another. The jaw-bones have no marrow ſever'd, but a little pulp of marrow diffuſed. Teeth likewiſe are thought to have a kind of marrow diffuſed, which cauſeth the ſenſe and pain: but it is rather ſinew; for marrow hath no ſenſe; no more than blood. Horn is alike throughout; and ſo is the nail.

751. NONE other of the hard ſubſtances have ſenſe, but the teeth; and the teeth have ſenſe, not only of pain but of cold.

BUT we will leave the enquiries of other hard ſubſtances unto their ſeveral places; and now enquire only of the teeth.

752. THE teeth are, in men, of three kinds: ſharp, as the foreteeth; broad, as the back-teeth, which we call the molar-teeth, or grinders; and pointed-teeth, or canine, which are between both. But there have been ſome men, that have had their teeth undivided, as of one whole bone, with ſome little mark in the place of the diviſion; as *Pyrrhus* had. Some creatures have over-long, or out-growing teeth, which we call fangs, or tuſks; as boars, pikes, ſalmons, and dogs, though leſs. Some living creatures have teeth againſt teeth; as men and horſes; and ſome have teeth, eſpecially their maſter-teeth, indented one within another like ſaws, as lions; and ſo again have dogs. Some fiſhes have divers rows of teeth in the roofs of their mouths; as pikes, ſalmons, trouts, *&c.* And many more in ſalt-waters. Snakes, and other ſerpents have venomous teeth; which are ſometimes miſtaken for their ſting.

753. No beaſt that hath horns, hath upper teeth; and no beaſt that hath teeth above, wanteth them below: but yet if they be of the ſame kind, it followeth not, that if the hard matter goeth not into upper teeth, it will go into horns; nor yet *e converſo*; for Does, that have no horns, have no upper teeth.

754. HORSES have, at three years old, a tooth put forth, which they call the colt's tooth; and at four years old there cometh the mark-tooth, which hath a hole as big as you may lay a pea within it; and that weareth ſhorter and ſhorter every year; till that at eight years old the tooth is ſmooth, and the hole gone; and then they ſay, that the mark is out of the horſe's mouth.

755. THE teeth of men breed firſt, when the child is about a year and half old: and then they caſt them, and new come about ſeven years old. But divers have backward-teeth come forth at twenty, yea ſome at thirty and forty. *Quaere* of the manner of the coming of them forth. They tell a tale of the old counteſs of *Deſmond*, who lived till ſhe was ſevenſcore years old, that ſhe did *dentire* twice or thrice; caſting her old teeth, and others coming in their place.

756. TEETH are much hurt by ſweet-meats; and by painting with mercury;

cury: and by things over-hot; and by things over-cold; and by rheums. And the pain of the teeth is one of the ſharpeſt of pains.

757. CONCERNING teeth, theſe things are to be conſidered. 1. The preſerving of them. 2. The keeping of them white. 3. The drawing of them with leaſt pain. 4. The ſtaying and eaſing of the tooth-ach. 5. The binding in of artificial teeth, where teeth have been ſtrucken out. 6. And laſt of all, that great one of reſtoring teeth in age. The inſtances that give any likelihood of reſtoring teeth in age, are; the late coming of teeth in ſome; and the renewing of the beaks in birds, which are commaterial with teeth. *Quaere* therefore more particularly how that cometh. And again, the renewing of horns. But yet that hath not been known to have been provoked by art; therefore let trial be made, whether horns may be procured to grow in beaſts that are not horned and how? And whether they may be procured to come larger than uſual; as to make an ox, or a deer, have a greater head of horns? And whether the head of a deer, that by age is more ſpitted, may be brought again to be more branched: for theſe trials, and the like, will ſhew, whether by art ſuch hard matter can be called and provoked. It may be tried alſo, whether birds may not have ſomething done to them when they are young, whereby they may be made to have greater or longer bills; or greater and longer talons? And whether children may not have ſome waſh, or ſomething to make their teeth better and ſtronger? Coral is in uſe as an help to the teeth of children.

*Experiments in conſort touching the generation and bearing of living creatures in the womb.*

758. SOME living creatures generate but at certain ſeaſons of the year; as deer, ſheep, wild conies, *&c.* and moſt ſorts of birds and fiſhes: others at any time of the year, as men; and all domeſtick creatures; as horſes, hogs, dogs, cats, *&c.* The cauſe of generation at all ſeaſons ſeemeth to be fulneſs: for generation is from redundance. This fulneſs ariſeth from two cauſes; either from the nature of the creature, if it be hot, and moiſt, and ſanguine; or from plenty of food. For the firſt, men, horſes, dogs, *&c.* which breed at all ſeaſons, are full of heat and moiſture; doves are the fulleſt of heat and moiſture amongſt birds, and therefore breed often; the tame dove almoſt continually. But deer are a melancholy dry creature, as appeareth by their fearfulneſs, and the hardneſs of their fleſh. Sheep are a cold creature, as appeareth by their mildneſs, and for that they ſeldom drink. Moſt ſort of birds are of a dry ſubſtance in compariſon of beaſts. Fiſhes are cold. For the ſecond cauſe, fulneſs of food; men, kine, ſwine, dogs, *&c.* feed full; and we ſee that thoſe creatures, which being wild, generate ſeldom, being tame, generate often; which is from warmth, and fulneſs of food. We find, that the time of going to rut of deer is in *September*; for that they need the whole ſummer's feed and graſs to make them fit for generation. And if rain come early about the middle of *September*, they go to rut ſomewhat the ſooner; if drought, ſomewhat the later. So ſheep, in reſpect of their ſmall heat, generate about the ſame time, or ſomewhat before. But for the moſt part, creatures that generate at certain ſeaſons, generate in the ſpring; as birds and fiſhes: for that the end of the winter, and the heat and comfort of the ſpring prepareth them. There is alſo another reaſon, why ſome creatures generate at certain ſeaſons; and that is the relation of their time of bearing, to the time of generation: for no creature goeth to generate, whilſt the female is full; nor whilſt ſhe is buſy in ſitting, or rearing her young.

And therefore it is found by experience, that if you take the eggs, or young ones, out of the nests of birds, they will fall to generate again three or four times one after another.

759. Of living creatures, some are longer time in the womb, and some shorter. Women go commonly nine months; the cow and the ewe about six months; Does go about nine months; mares eleven months; bitches nine weeks; elephants are said to go two years; for the received tradition of ten years is fabulous. For birds there is double enquiry; the distance between the treading or coupling, and the laying of the egg; and again, between the egg laid, and the disclosing or hatching. And amongst birds, there is less diversity of time, than amongst other creatures; yet some there is: for the hen sitteth but three weeks; the turky-hen, goose, and duck, a month: *Quaere* of others. The cause of the great difference of times amongst living creatures, is, either from the nature of the kind; or from the constitution of the womb. For the former, those that are longer in coming to their maturity or growth, are longer in the womb; as is chiefly seen in men: and so elephants which are long in the womb, are long time in coming to their full growth. But in most other kinds, the constitution of the womb, (that is, the hardness or dryness thereof) is concurrent with the former cause. For the colt hath about four years of growth; and so the fawn; and so the calf. But whelps, which come to their growth (commonly) within three quarters of a year, are but nine weeks in the womb. As for birds, as there is less diversity amongst them in the time of their bringing forth; so there is less diversity in the time of their growth; most of them coming to their growth within a twelvemonth.

760. Some creatures bring forth many young ones at a burthen; as bitches, hares, coneys, *&c.* Some ordinarily but one; as women, lionesses, *&c.* This may be caused, either by the quantity of sperm required to the producing one of that kind; which if less be required, may admit greater number; if more, fewer: or by the partitions and cells of the womb, which may sever the sperm.

*Experiments in consort touching species visible.*

761. There is no doubt, but light by refraction will shew greater, as well as things coloured. For like as a shilling in the bottom of the water will shew greater; so will a candle in a lanthorn, in the bottom of the water. I have heard of a practice, that glow-worms in glasses were put in the water to make the fish come. But I am not yet informed, whether when a diver diveth, having his eyes open, and swimmeth upon his back; whether (I say) he see things in the air, greater or less. For it is manifest, that when the eye standeth in the finer medium, and the object is in the grosser, things shew greater; but contrariwise, when the eye is placed in the grosser medium, and the object in the finer, how it worketh I know not.

762. It would be well bolted out, whether great refractions may not be made upon reflexions, as well as upon direct beams. For example, we see, that take an empty bason, put an angel of gold, or what you will, into it; then go so far from the bason, till you cannot see the angel, because it is not in a right line; then fill the bason with water, and you shall see it out of its place, because of the reflexion. To proceed therefore, put a looking-glass into a bason of water; I suppose you shall not see the image in a right line, or at equal angles, but aside. I know not whether this experiment may not be extended so, as you might see the image, and not the glass; which for beauty

and

and ſtrangeneſs were a fine proof: for then you ſhould ſee the image like a ſpirit in the air. As for example, if there be a ciſtern or pool of water, you ſhall place over againſt it a picture of the devil, or what you will, ſo as you do not ſee the water. Then put a looking-glaſs in the water: now if you can ſee the devil's picture aſide, not ſeeing the water, it would look like a devil indeed. They have an old tale in *Oxford*, that friar *Bacon* walked between two ſteeples: which was thought to be done by glaſſes, when he walked upon the ground.

*Experiments in conſort touching impulſion and percuſſion.*

763. A weighty body put into motion, is more eaſily impelled, than at firſt when it reſteth. The cauſe is, partly becauſe motion doth diſcuſs the torpor of ſolid bodies; which beſide their motion of gravity, have in them a natural appetite not to move at all; and partly, becauſe a body that reſteth, doth get, by the reſiſtance of the body upon which it reſteth, a ſtronger compreſſion of parts than it hath of it ſelf: and therefore needeth more force to be put in motion. For if a weighty body be penſile, and hang but by a thread, the percuſſion will make an impulſion very near as eaſily, as if it were already in motion.

764. A body over great, or over ſmall, will not be thrown ſo far as a body of a middle ſize: ſo that (it ſeemeth) there muſt be a commenſuration, or proportion between the body moved and the force, to make it move well. The cauſe is, becauſe to the impulſion there is requiſite the force of the body that moveth, and the reſiſtance of the body that is moved: and if the body be too great, it yieldeth too little; and if it be too ſmall, it reſiſteth too little.

765. IT is common experience, that no weight will preſs or cut ſo ſtrong, being laid upon a body, as falling or ſtrucken from above. It may be the air hath ſome part in furthering the percuſſion; but the chief cauſe I take to be, for that the parts of the body moved have by impulſion, or by the motion of gravity continued a compreſſion in them, as well downwards as they have when they are thrown, or ſhot through the air forwards. I conceive alſo, that the quick loſs of that motion preventeth the reſiſtance of the body below; and priority of the force (always) is of great efficacy, as appeareth in infinite inſtances.

*Experiment ſolitary touching titillation.*

766. TICKLING is moſt in the ſoles of the feet, and under the arm-holes, and on the ſides. The cauſe is, the thinneſs of the ſkin in thoſe parts, joined with the rareneſs of being touched there: for all tickling is a light motion of the ſpirits, which the thinneſs of the ſkin, and ſuddenneſs and rareneſs of touch do further: for we ſee a feather, or a ruſh, drawn along the lip or cheek, doth tickle; whereas a thing more obtuſe, or a touch more hard, doth not. And for ſuddenneſs, we ſee no man can tickle himſelf: we ſee alſo that the palm of the hand, though it hath as thin a ſkin as the other parts mentioned, yet is not tickliſh, becauſe it is accuſtomed to be touched. Tickling alſo cauſeth laughter. The cauſe may be the emiſſion of the ſpirits, and ſo of the breath, by a flight from titillation; for upon tickling we ſee there is ever a ſtarting, or ſhrinking away of the part to avoid it; and we ſee alſo, that if you tickle the noſtrils with a feather, or ſtraw, it procureth ſneezing; which is a ſudden emiſſion of the ſpirits that do likewiſe expel the moiſture. And tickling is ever painful, and not well endured.

*Experiment ſolitary touching the ſcarcity of rain in* AEgypt.

767. IT is ſtrange, that the river of *Nilus* overflowing, as it doth, the countrey of *AEgypt*, there ſhould be nevertheleſs little or no rain in that countrey. The cauſe muſt be either in the nature of the water, or in the nature of the air, or of both. In the water, it may be aſcribed either unto the long race of the water: for ſwift running waters vapour not ſo much as ſtanding waters; or elſe to the concoction of the water; for waters well concocted vapour not ſo much as waters raw; no more than waters upon the fire do vapour ſo much after ſome time of boiling as at the firſt. And it is true, that the water of *Nilus* is ſweeter than other waters in taſte; and it is excellent good for the ſtone, and hypochondriacal melancholy, which ſheweth it is lenifying; and it runneth through a countrey of a hot climate and flat, without ſhade either of woods or hills, whereby the ſun muſt needs have great power to concoct it. As for the air, (from whence I conceive this want of ſhowers cometh chiefly,) the cauſe muſt be, for that the air is of it ſelf thin and thirſty; and as ſoon as ever it getteth any moiſture from the water, it imbibeth and diſſipateth it in the whole body of the air, and ſuffereth it not to remain in vapour, whereby it might breed rain.

*Experiment ſolitary touching clarification.*

768. IT hath been touched in the title of percolations, (namely ſuch as are inwards) that the whites of eggs and milk do clarify; and it is certain, that in *AEgypt* they prepare and clarify the water of *Nile*, by putting it into great jars of ſtone, and ſtirring it about with a few ſtamped almonds, wherewith they alſo beſmear the mouth of the veſſel; and ſo draw it off, after it hath reſted ſome time. It were good to try this clarifying with almonds in new beer, or muſte, to haſten and perfect the clarifying.

*Experiment ſolitary touching plants without leaves.*

769. THERE be ſcarce to be found any vegetables, that have branches and no leaves, except you allow coral for one. But there is alſo in the deſarts of S. *Macario* in *AEgypt* a plant which is long, leafleſs, brown of colour, and branched like coral, ſave that it cloſeth at the top. This being ſet in water within a houſe, ſpreadeth and diſplayeth ſtrangely; and the people thereabout have a ſuperſtitious belief, that in the labour of women it helpeth to the eaſy deliverance.

*Experiment ſolitary touching the materials of glaſs.*

770. THE cryſtalline *Venice* glaſs, is reported to be a mixture in equal portions of ſtones brought from *Pavia* by the river *Ticinum*; and the aſhes of a weed, called by the *Arabs* kal, which is gathered in a deſart between *Alexandria* and *Roſetta*; and is by the *AEgyptians* uſed firſt for fuel; and then they cruſh the aſhes into lumps like a ſtone, and ſo ſell them to the *Venetians* for their glaſs-works.

*Experiment ſolitary touching prohibition of putrefaction, and the long conſervation of bodies.*

771. IT is ſtrange, and well to be noted, how long carcaſſes have continued uncorrupt, and in their former dimenſions, as appeareth in the mummies of *AEgypt*; having laſted, as is conceived, (ſome of them,) three thouſand years. It is true, they find means to draw forth the brains, and to take forth the

the entrails, which are the parts apteſt to corrupt. But that is nothing to the wonder: for we ſee what a ſoft and corruptible ſubſtance the fleſh of all the other parts of the body is. But it ſhould ſeem, that according to our obſervation and axiom, in our hundredth experiment, putrefaction, which we conceive to be ſo natural a period of bodies, is but an accident; and that matter maketh not that haſte to corruption that is conceived. And therefore bodies in ſhining amber, in quick-ſilver, in balms, (whereof we now ſpeak,) in wax, in honey, in gums, and (it may be) in conſervatories of ſnow, *&c.* are preſerved very long. It need not go for repetition, if we reſume again that which we ſaid in the aforeſaid experiment concerning annihilation; namely, that if you provide againſt three cauſes of putrefaction, bodies will not corrupt: the firſt is, that the air be excluded, for that undermineth the body, and conſpireth with the ſpirit of the body to diſſolve it. The ſecond is, that the body adjacent and ambient be not commaterial, but merely heterogeneal towards the body that is to be preſerved; for if nothing can be received by the one, nothing can iſſue from the other; ſuch are quick-ſilver and white amber, to herbs, and flies, and ſuch bodies. The third is, that the body to be preſerved be not of that groſs that it may corrupt within it ſelf, although no part of it iſſue into the body adjacent: and therefore it muſt be rather thin and ſmall, than of bulk. There is a fourth remedy alſo, which is, that if the body to be preſerved be of bulk, as a corps is, then the body that encloſeth it muſt have a virtue to draw forth, and dry the moiſture of the inward body; for elſe the putrefaction will play within, though nothing iſſue forth. I remember *Livy* doth relate, that there were found at a time two coffins of lead in a tomb; whereof the one contained the body of king *Numa*, it being ſome four hundred years after his death: and the other, his books of ſacred rites and ceremonies, and the diſcipline of the pontifs; and that in the coffin that had the body, there was nothing (at all) to be ſeen, but a little light cinders about the ſides; but in the coffin that had the books, they were found as freſh as if they had been but newly written, being written in parchment, and covered over with watch candles of wax three or four fold. By this it ſeemeth that the *Romans* in *Numa*'s time were not ſo good embalmers as the *AEgyptians* were; which was the cauſe that the body was utterly conſumed. But I find in *Plutarch*, and others, that when *Auguſtus Caeſar* viſited the ſepulchre of *Alexander* the *Great* in *Alexandria*, he found the body to keep its dimenſion: but withal, that notwithſtanding all the embalming, (which no doubt was of the beſt,) the body was ſo tender, as *Caeſar* touching but the noſe of it, defaced it. Which maketh me find it very ſtrange, that the *AEgyptian* mummies ſhould be reported to be as hard as ſtone-pitch; for I find no difference but one, which indeed may be very material; namely, that the ancient *AEgyptian* mummies were ſhrowded in a number of folds of linen, beſmeared with gums, in manner of ſear-cloth, which it doth not appear was practiſed upon the body of *Alexander*.

*Experiment ſolitary touching the abundance of nitre in certain ſea-ſhores.*

772. NEAR the caſtle of *Caty*, and by the wells of *Aſſan*, in the land of *Idumaea*, a great part of the way you would think the ſea were near at hand, tho' it be a good diſtance off: and it is nothing but the ſhining of the nitre upon the ſea-ſands, ſuch abundance of nitre the ſhores there do put forth.

*Experiment ſolitary touching bodies that are born up by water.*

773. The dead-ſea, which vomiteth up *bitumen*, is of that craſſitude, as living bodies bound hand and foot caſt into it have been born up, and not ſunk; which ſheweth, that all ſinking into water is but an over-weight of the body put into the water in reſpect of the water; ſo that you may make water ſo ſtrong and heavy, of quick-ſilver, (perhaps) or the like, as may bear up iron; of which I ſee no uſe, but impoſture. We ſee alſo, that all metals except gold, for the ſame reaſon ſwim upon quick-ſilver.

*Experiment ſolitary touching fuel that conſumeth little or nothing.*

774. It is reported, that at the foot of a hill, near the *mare mortuum*, there is a black ſtone (whereof pilgrims make fires) which burneth like a coal, and diminiſheth not, but only waxeth brighter and whiter. That it ſhould do ſo, is not ſtrange; for we ſee iron red-hot burneth, and conſumeth not; but the ſtrangeneſs is, that it ſhould continue any time ſo: for iron, as ſoon as it is out of the fire, deadeth ſtraitways. Certainly it were a thing of great uſe and profit, if you could find out fuel that would burn hot, and yet laſt long: neither am I altogether incredulous, but there may be ſuch candles as they ſay are made of ſalamander's wool; being a kind of mineral, which whiteneth alſo in the burning, and conſumeth not. The queſtion is this; flame muſt be made of ſomewhat, and commonly it is made of ſome tangible body which hath weight: but it is not impoſſible perhaps that it ſhould be made of ſpirit, or vapour, in a body, (which ſpirit or vapour hath no weight,) ſuch as is the matter of *ignis fatuus*. But then you will ſay, that that vapour alſo can laſt but a ſhort time: to that it may be anſwer'd, that by the help of oil, and wax, and other candle-ſtuff, the flame may continue, and the wiek not burn.

*Experiment ſolitary oeconomical touching cheap fuel.*

775. Sea-coal laſts longer than char-coal; and char-coal of roots, being coaled into great pieces, laſts longer than ordinary char-coal. Turf and peat, and cow-ſheards, are cheap fuels, and laſt long. Small-coal, or briar-coal, poured upon char-coal, make them laſt longer. Sedge is a cheap fuel to brew or bake with; the rather becauſe it is good for nothing elſe. Trial would be made of ſome mixture of ſea-coal with earth or chalk; for if that mixture be, as the ſea-coal men uſe it, privily, to make the bulk of the coal greater, it is deceit; but if it be uſed purpoſely, and be made known, it is ſaving.

*Experiment ſolitary touching the gathering of wind for freſhneſs.*

776. It is at this day in uſe in *Gaza*, to couch potſherds or veſſels of earth in their walls to gather the wind from the top, and to paſs it down in ſpouts into rooms. It is a device for freſhneſs in great heats: and it is ſaid, there are ſome rooms in *Italy* and *Spain* for freſhneſs, and gathering the winds and air in the heats of ſummer: but they be but pennings of the winds, and enlarging them again, and making them reverberate and go round in circles, rather than this device of ſpouts in the wall.

*Experiment ſolitary touching the trials of airs.*

777. There would be uſed much diligence in the choice of ſome bodies and places (as it were) for the taſting of air; to diſcover the wholeſomeneſs

or

or unwholeſomeneſs, as well of ſeaſons, as of the ſeats of dwellings. It is certain, that there be ſome houſes wherein confitures and pies will gather mould more than in others. And I am perſuaded, that a piece of raw fleſh or fiſh, will ſooner corrupt in ſome airs than in others. They be noble experiments that can make this diſcovery; for they ſerve for a natural divination of ſeaſons, better than the aſtronomers can by their figures: and again, they teach men where to chuſe their dwelling, for their better health.

*Experiment ſolitary touching encreaſing of milk in milch beaſts.*

778. THERE is a kind of ſtone about *Bethlehem*, which they grind to powder, and put into water, whereof cattle drink, which maketh them give more milk. Surely there would be ſome better trials made of mixtures of water in ponds for cattle, to make them more milch, or to fatten them, or to keep them from murrain. It may be chalk and nitre are of the beſt.

*Experiment ſolitary touching ſand of the nature of glaſs.*

779. IT is reported, that in the valley near the mountain *Carmel* in *Judaea* there is a ſand, which of all other hath moſt affinity with glaſs; inſomuch as other minerals laid in it turn to a glaſſy ſubſtance without the fire; and again, glaſs put into it turneth into the mother ſand. The thing is very ſtrange, if it be true: and it is likelieſt to be cauſed by ſome natural furnace or heat in the earth; and yet they do not ſpeak of any eruption of flames. It were good to try in glaſs-works, whether the crude materials of glaſs, mingled with glaſs, already made and re-moulten, do not facilitate the making of glaſs with leſs heat.

*Experiment ſolitary touching the growth of coral.*

780. IN the ſea, upon the ſouth-weſt of *Sicily*, much coral is found. It is a ſub-marine plant, it hath no leaves: it brancheth only when it is under water; it is ſoft, and green of colour; but being brought into the air, it becometh hard and ſhining red, as we ſee. It is ſaid alſo to have a white berry; but we find it not brought over with the coral. Belike it is caſt away as nothing worth: enquire better of it, for the diſcovery of the nature of the plant.

*Experiment ſolitary touching the gathering of manna.*

781. The manna of *Calabria* is the beſt, and in moſt plenty. They gather it from the leaf of the mulberry tree; but not of ſuch mulberry trees as grow in the valleys. And manna falleth upon the leaves by night, as other dews do. It ſhould ſeem, that before thoſe dews come upon trees in the valleys, they diſſipate and cannot hold out. It ſhould ſeem alſo, the mulberry leaf it ſelf hath ſome coagulating virtue, which inſpiſſateth the dew, for that it is not found upon other trees: and we ſee by the ſilk-worm which feedeth upon that leaf, what a dainty ſmooth juice it hath; and the leaves alſo, (eſpecially of the black mulberry) are ſomewhat briſtly, which may help to preſerve the dew. Certainly it were not amiſs to obſerve a little better the dews that fall upon trees, or herbs, growing on mountains; for it may be, many dews fall, that ſpend before they come to the valleys. And I ſuppoſe, that he that would gather the beſt *May*-dew for medicine, ſhould gather it from the hills.

*Expe-*

*Experiment ſolitary touching the correcting of wine.*

782. IT is ſaid, they have a manner to prepare their *Greek* wines, to keep them from fuming and inebriating, by adding ſome ſulphur or alume: whereof the one is unctuous, and the other is aſtringent. And certain it is, that thoſe two natures do beſt repreſs fumes. This experiment would be transferred unto other wine and ſtrong beer, by putting in ſome like ſubſtances while they work; which may make them both to fume leſs, and to inflame leſs.

*Experiment ſolitary touching the materials of wild-fire.*

783. IT is conceived by ſome, (not improbably) that the reaſon why wild-fires (whereof the principal ingredient is *bitumen*) do not quench with water, is, for that the firſt concretion of *bitumen*, is a mixture of a fiery and watery ſubſtance: ſo is not ſulphur. This appeareth, for that in the place near *Puteoli*, which they call the court of *Vulcan*, you ſhall hear under the earth a horrible thundring of fire and water conflicting together: and there break forth alſo ſpouts of boiling water. Now that place yieldeth great quantities of *bitumen*; whereas *AEtna*, and *Veſuvius*, and the like, which conſiſt upon ſulphur, ſhoot forth ſmoak, and aſhes, and pumice, but no water. It is reported alſo, that *bitumen* mingled with lime, and put under water, will make as it were an artificial rock; the ſubſtance becometh ſo hard.

*Experiment ſolitary touching plaiſter growing as hard as marble.*

784. THERE is a cement, compounded of flower, whites of eggs, and ſtone powdered, that becometh hard as marble: wherewith *Piſcina Mirabilis*, near *Cuma*, is ſaid to have the walls plaiſtered. And it is certain and tried, that the powder of load-ſtone and flint, by the addition of whites of eggs and gum-dragon, made into paſte, will in a few days harden to the hardneſs of a ſtone.

*Experiment ſolitary touching judgment of the cure in ſome ulcers and hurts.*

785. It hath been noted by the ancients, that in full or impure bodies, ulcers or hurts in the legs are hard to cure, and in the head more eaſy. The cauſe is, for that ulcers or hurts in the legs require deſiccation, which by the defluxion of humours to the lower parts is hindred; whereas hurts and ulcers in the head require it not; but contrariwiſe dryneſs maketh them more apt to conſolidate. And in modern obſervation, the like difference hath been found between *French-men* and *Engliſh-men*; whereof the one's conſtitution is more dry, and the other's more moiſt. And therefore a hurt of the head is harder to cure in a *French-man*, and of the leg in an *Engliſh-man*.

*Experiment ſolitary touching the healthfulneſs or unhealthfulneſs of the ſouthern wind.*

786. IT hath been noted by the ancients, that ſouthern winds, blowing much, without rain, do cauſe a feverous diſpoſition of the year; but with rain, not. The cauſe is, for that ſouthern winds do of themſelves qualify the air, to be apt to cauſe fevers; but when ſhowers are joined, they do refrigerate in part, and check the ſultry heat of the ſouthern wind. Therefore this holdeth not in the ſea-coaſts, becauſe the vapour of the ſea, without ſhowers, doth refreſh.

*Experiment ſolitary touching wounds.*

787. IT hath been noted by the ancients, that wounds which are made with braſs, heal more eaſily than wounds made with iron. The cauſe is, for that braſs hath in it ſelf a ſanative virtue; and ſo in the very inſtant helpeth ſomewhat: but iron is corroſive, and not ſanative. And therefore it were good, that the inſtruments which are uſed by chirurgeons about wounds, were rather of braſs than iron.

*Experiment ſolitary touching mortification by cold.*

788. IN the cold countries, when men's noſes and ears are mortified, and (as it were) gangrened with cold, if they come to a fire they rot off preſently. The cauſe is, for that the few ſpirits that remain in thoſe parts, are ſuddenly drawn forth, and ſo putrefaction is made compleat. But ſnow put upon them helpeth; for that it preſerveth thoſe ſpirits that remain, till they can revive; and beſides, ſnow hath in it a ſecret warmth: as the monk proved out of the text; *qui dat nivem ſicut lanam, gelu ſicut cineres ſpargit.* Whereby he did infer, that ſnow did warm like wool, and froſt did fret like aſhes. Warm water alſo doth good; becauſe by little and little it openeth the pores, without any ſudden working upon the ſpirits. This experiment may be transferred unto the cure of gangrenes, either coming of themſelves, or induced by too much applying of opiates: wherein you muſt beware of dry heat, and reſort to things that are refrigerant, with an inward warmth and virtue of cheriſhing.

*Experiment ſolitary touching weight.*

789. WEIGH iron and *aqua fortis* ſeverally; then diſſolve the iron in the *aqua fortis*, and weigh the diſſolution; and you ſhall find it to bear as good weight as the bodies did ſeverally; notwithſtanding a good deal of waſte, by a thick vapour that iſſueth during the working: which ſheweth that the opening of a body doth increaſe the weight. This was tried once or twice, but I know not whether there were any error in the trial.

*Experiment ſolitary touching the ſuper-natation of bodies.*

790. TAKE of *aqua fortis* two ounces, of quickſilver two drams, (for that charge the *aqua fortis* will bear;) the diſſolution will not bear a flint as big as a nutmeg: yet (no doubt) the increaſing of the weight of water, will increaſe its power of bearing; as we ſee brine, when it is ſalt enough, will bear an egg. And I remember well a phyſician, that uſed to give ſome mineral baths for the gout, *&c.* And the body when it was put into the bath, could not get down ſo eaſily as in ordinary water. But it ſeemeth, the weight of the quickſilver, more than the weight of a ſtone, doth not compenſe the weight of a ſtone, more than the weight of the *aqua fortis.*

*Experiment ſolitary touching the flying of unequal bodies in the air.*

761. LET there be a body of unequal weight; (as of wood and lead, or bone and lead;) if you throw it from you with the light end forward, it will turn, and the weightier end will recover to be forwards; unleſs the body be over long. The cauſe is, for that the more denſe body hath a more violent preſſure of the parts from the firſt impulſion; which is the cauſe (though heretofore not found out, as hath been often ſaid) of all violent motions: and when the hinder part moveth ſwifter, (for that it leſs endureth preſſure

of parts) than the forward part can make way for it, it muſt needs be that the body turn over: for (turned) it can more eaſily draw forward the lighter part. *Galilaeus* noteth it well; that if an open trough wherein water is, be driven faſter than the water can follow, the water gathereth upon an heap towards the hinder end, where the motion began; which he ſuppoſeth (holding confidently the motion of the earth) to be the cauſe of the ebbing and flowing of the ocean; becauſe the earth over-runneth the water. Which theory, though it be falſe, yet the firſt experiment is true. As for the inequality of the preſſure of parts, it appeareth manifeſtly in this; that if you take a body of ſtone, or iron, and another of wood, of the ſame magnitude and ſhape, and throw them with equal force, you cannot poſſibly throw the wood ſo far as the ſtone or iron.

*Experiment ſolitary touching water, that it may be the medium of ſounds.*

792. It is certain, (as it hath been formerly in part touched) that water may be the medium of ſounds. If you daſh a ſtone againſt a ſtone in the bottom of the water, it maketh a ſound. So a long pole ſtruck upon gravel in the bottom of the water, maketh a ſound. Nay, if you ſhould think that the ſound cometh up by the pole, and not by the water, you ſhall find that an anchor let down by a rope, maketh a ſound; and yet the rope is no ſolid body whereby the ſound can aſcend.

*Experiment ſolitary of the flight of the ſpirits upon odious objects.*

793. All objects of the ſenſes which are very offenſive, do cauſe the ſpirits to retire; and upon their flight, the parts are (in ſome degree) deſtitute; and ſo there is induced in them a trepidation and horror. For ſounds, we ſee that the grating of a ſaw, or any very harſh noiſe, will ſet the teeth on edge, and make all the body ſhiver. For taſtes, we ſee, that in the taking of a potion, or pills, the head and the neck ſhake. For odious ſmells, the like effect followeth, which is leſs perceived, becauſe there is a remedy at hand by ſtopping of the noſe: but in horſes that can uſe no ſuch help, we ſee the ſmell of a carrion, eſpecially of a dead horſe, maketh them fly away, and take on almoſt as if they were mad. For feeling, if you come out of the ſun ſuddenly into a ſhade, there followeth a chilneſs or ſhivering in all the body. And even in ſight, which hath (in effect) no odious object, coming into ſudden darkneſs, induceth an offer to ſhiver.

*Experiment ſolitary touching the ſuper-reflexion of echo's.*

794. There is in the city of *Ticinum* in *Italy*, a church that hath windows only from above: it is in length an hundred feet, in breadth twenty feet, and in height near fifty; having a door in the midſt. It reporteth the voice twelve or thirteen times, if you ſtand by the cloſe end wall, over-againſt the door. The echo fadeth, and dieth by little and little, as the echo at *Pont-Charenton* doth. And the voice ſoundeth, as if it came from above the door. And if you ſtand at the lower end, or on either ſide of the door, the echo holdeth; but if you ſtand in the door, or in the midſt juſt over-againſt the door, not. Note that all echo's ſound better againſt old walls than new; becauſe they are more dry and hollow.

*Experiment ſolitary touching the force of imagination, imitating that of the ſenſe.*

795. Thoſe effects which are wrought by the percuſſion of the ſenſe, and

by things in fact, are produced likewiſe in ſome degree by the imagination. Therefore if a man ſee another eat ſour or acid things, which ſet the teeth on edge, this object tainteth the imagination. So that he that ſeeth the thing done by another, hath his own teeth alſo ſet on edge. So if a man ſee another turn ſwiftly and long; or if he look upon wheels that turn, himſelf waxeth turn-ſick. So if a man be upon an high place without rails, or good hold, except he be uſed to it, he is ready to fall: for imagining a fall, it putteth his ſpirits into the very action of a fall. So many upon the ſeeing of others bleed, or ſtrangled, or tortured, themſelves are ready to faint, as if they bled, or were in ſtrife.

*Experiment ſolitary touching preſervation of bodies.*

796. TAKE a ſtock-gilly-flower, and tie it gently upon a ſtick, and put them both into a ſtoop glaſs full of quickſilver, ſo that the flower be covered: then lay a little weight upon the top of the glaſs, that may keep the ſtick down; and look upon them after four or five days; and you ſhall find the flower freſh, and the ſtalk harder, and leſs flexible, than it was. If you compare it with another flower gathered at the ſame time, it will be the more manifeſt. This ſheweth that bodies do preſerve excellently in quickſilver; and not preſerve only, but by the coldneſs of the quickſilver indurate; for the freſhneſs of the flower may be merely conſervation; which is the more to be obſerved, becauſe the quickſilver preſſeth the flower; but the ſtiffneſs of the ſtalk cannot be without induration, from the cold (as it ſeemeth) of the quickſilver.

*Experiment ſolitary touching the growth or multiplying of metals.*

797. IT is reported by ſome of the ancients, that in *Cyprus* there is a kind of iron, that being cut into pieces, and put into the ground, if it be well water'd, will encreaſe into greater pieces. This is certain, and known of old; that lead will multiply and encreaſe; as hath been ſeen in old ſtatues of ſtone which have been put in cellars; the feet of them being bound with leaden bands; where (after a time) there appeared, that the lead did ſwell; inſomuch as it hanged upon the ſtone like warts.

*Experiment ſolitary touching the drowning of the more baſe metal in the more precious.*

798. I call drowning of metals, when that the baſer metal is ſo incorporate with the more rich, as it can by no means be ſeparated again; which is a kind of verſion, though falſe: as if ſilver ſhould be inſeparably incorporated with gold; or copper, and lead, with ſilver. The ancient *electrum* had in it a fifth of ſilver to the gold, and made a compound metal, as fit for moſt uſes as gold; and more reſplendent, and more qualified in ſome other properties; but then that was eaſily ſeparated. This to do privily, or to make the compound paſs for the rich metal ſimple, is an adulteration or counterfeiting: But if it be done avowedly, and without diſguiſing, it may be a great ſaving of the richer metal. I remember to have heard of a man, ſkilful in metals, that a fifteenth part of ſilver incorporate with gold, will not be recovered by any water of ſeparation, except you put a greater quantity of ſilver to draw to it the leſs; which (he ſaid) is the laſt refuge in ſeparations. But that is a tedious way, which no man (almoſt) will think on. This would be better enquired; and the quantity of the fifteenth turned to a twentieth; and likewiſe with ſome little additional, that may further the in-

trinſick incorporation. Note, that ſilver in gold will be detected by weight, compared with the dimenſion; but lead in ſilver, (lead being the weightier metal,) will not be detected; if you take ſo much the more ſilver, as will countervail the over-weight of the lead.

*Experiment ſolitary touching fixation of bodies.*

799. GOLD is the only ſubſtance, which hath nothing in it volatile, and yet melteth without much difficulty. The melting ſheweth that it is not jejune, or ſcarce in ſpirit. So that the fixing of it is not want of ſpirit to fly out, but the equal ſpreading of the tangible parts, and the cloſe coacervation of them: whereby they have the leſs appetite, and no means (at all) to iſſue forth. It were good therefore to try, whether glaſs remolten do loſe any weight? for the parts in glaſs are evenly ſpread; but they are not ſo cloſe as in gold; as we ſee by the eaſy admiſſion of light, heat, and cold; and by the ſmallneſs of the weight. There be other bodies fixed which have little or no ſpirit; ſo as there is nothing to fly out; as we ſee in the ſtuff, whereof coppels are made; which they put into furnaces, upon which fire worketh not: ſo that there are three cauſes of fixation; the even ſpreading both of the ſpirits and tangible parts, the cloſeneſs of the tangible parts, and the jejuneneſs or extreme comminution of ſpirits; of which three, the two firſt may be joined with a nature liquefiable, the laſt not.

*Experiment ſolitary touching the reſtleſs nature of things in themſelves, and their deſire to change.*

800. IT is a profound contemplation in nature, to conſider of the emptineſs (as we may call it) or inſatisfaction of ſeveral bodies, and of their appetite to take in others. Air taketh in lights, and ſounds, and ſmells, and vapours; and it is moſt manifeſt, that it doth it with a kind of thirſt, as not ſatisfied with its own former conſiſtence; for elſe it would never receive them in ſo ſuddenly and eaſily. Water, and all liquors, do haſtily receive dry and more terreſtrial bodies, proportionable: and dry bodies, on the other ſide, drink in waters and liquors: ſo that (as it was well ſaid by one of the ancients, of earthy and watery ſubſtances) one is a glue to another. Parchment, ſkins, cloth, *&c.* drink in liquors, though themſelves be entire bodies, and not comminuted, as ſand and aſhes, not apparently porous: metals themſelves do receive in readily ſtrong-waters; and ſtrong-waters likewiſe do readily pierce into metals and ſtones: and that ſtrong-water will touch upon gold, that will not touch upon ſilver; and *è converſo*. And gold, which ſeemeth by the weight to be the cloſeſt and moſt ſolid body, doth greedily drink in quick-ſilver. And it ſeemeth, that this reception of other bodies is not violent: for it is (many times) reciprocal, and as it were with conſent. Of the cauſe of this, and to what axiom it may be referred, conſider attentively; for as for the pretty aſſertion, that matter is like a common ſtrumpet that deſireth all forms, it is but a wandring notion. Only flame doth not content it ſelf to take in any other body, but either to overcome and turn another body into it ſelf, as by victory; or it ſelf to die, and go out.

# NATURAL HISTORY.

## CENT. IX.

*Experiments in conſort touching perception in bodies inſenſible, tending to natural divination or ſubtile trials.*

IT is certain, that all bodies whatſoever, though they have no ſenſe, yet they have perception: for when one body is applied to another, there is a kind of election to embrace that which is agreeable, and to exclude or expel that which is ingrate: and whether the body be alterant, or altered, evermore a perception precedeth operation; for elſe all bodies would be alike one to another. And ſometimes this perception, in ſome kind of bodies, is far more ſubtile than the ſenſe; ſo that the ſenſe is but a dull thing in compariſon of it: we ſee a weather-glaſs will find the leaſt difference of the weather, in heat, or cold, when men find it not. And this perception alſo is ſometimes at diſtance, as well as upon the touch; as when the load-ſtone draweth iron; or flame fireth *Naphtha* of *Babylon*, a great diſtance off. It is therefore a ſubject of a very noble enquiry, to enquire of the more ſubtile perceptions; for it is another key to open nature, as well as the ſenſe, and ſometimes better. And beſides, it is a principal means of natural divination; for that which in theſe perceptions appeareth early, in the great effects cometh long after. It is true alſo, that it ſerveth to diſcover that which is hid, as well as to foretel that which is to come, as it is in many ſubtile trials; as to try whether ſeeds be old or new, the ſenſe cannot inform; but if you boil them in water, the new ſeeds will ſprout ſooner: and ſo of water, the taſte will not diſcover the beſt water; but the ſpeedy conſuming of it, and many other means, which we have heretofore ſet down, will diſcover it. So in all phyſiognomy, the lineaments of the body will diſcover thoſe natural inclinations of the mind which diſſimulation will conceal, or diſcipline will ſuppreſs. We ſhall therefore now handle only thoſe two perceptions, which pertain to natural divination and diſcovery; leaving the handling of perception in other things to be diſpoſed elſewhere. Now it is true, that divination is attained by other means; as if you know the cauſes, if you know the concomitants, you may judge of the effect to follow: and the like may be ſaid of diſcovery; but we tye our ſelves here to that divination and diſcovery chiefly, which is cauſed by an early or ſubtile perception.

THE aptneſs or propenſion of air or water, to corrupt or putrefy, (no doubt) is to be found before it break forth into manifeſt effects of diſeaſes,

blasting, or the like. We will therefore set down some prognosticks of pestilential and unwholesome years.

801. THE wind blowing much from the south without rain, and worms in the oak-apple, have been spoken of before. Also the plenty of frogs, grashoppers, flies, and the like creatures bred of putrefaction, doth portend pestilential years.

802. GREAT and early heats in the spring, (and namely in *May*,) without winds, portend the same; and generally so do years with little wind or thunder.

803. GREAT droughts in summer, lasting till towards the end of *August*, and some gentle showers upon them, and then some dry weather again, do portend a pestilent summer the year following: for about the end of *August* all the sweetness of the earth, which goeth into plants and trees, is exhaled, (and much more if the *August* be dry;) so that nothing then can breathe forth of the earth but a gross vapour, which is apt to corrupt the air: and that vapour, by the first showers, if they be gentle, is released, and cometh forth abundantly. Therefore they that come abroad soon after those showers, are commonly taken with sickness: and in *Africa*, no body will stir out of doors after the first showers. But if the first showers come vehemently, then they rather wash and fill the earth, than give it leave to breathe forth presently. But if dry weather come again, then it fixeth and continueth the corruption of the air, upon the first showers begun; and maketh it of ill influence, even to the next summer; except a very frosty winter discharge it, which seldom succeedeth such droughts.

804. THE lesser infections, of the small-pox, purple fevers, agues, in the summer precedent, and hovering all winter, do portend a great pestilence in the summer following; for putrefaction doth not rise to its height at once.

805. IT were good to lay a piece of raw flew or fish in the open air; and if it putrefy quickly, it is a sign of a disposition in the air to putrefaction. And because you cannot be informed whether the putrefaction be quick or late, except you compare this experiment with the like experiment in another year, it were not amiss in the same year, and at the same time, to lay one piece of flesh or fish in the open air, and another of the same kind and bigness within doors: for I judge, that if a general disposition be in the air to putrefy, the flesh, or fish, will sooner putrefy abroad where the air hath more power, than in the house, where it hath less, being many ways corrected. And this experiment would be made about the end of *March*: for that season is likeliest to discover what the winter hath done, and what the summer following will do, upon the air. And because the air (no doubt) receiveth great tincture and infusion from the earth; it were good to try that exposing of flesh, or fish, both upon a stake of wood some height above the earth, and upon the flat of the earth.

806. TAKE *May* dew, and see whether it putrefy quickly or no; for that likewise may disclose the quality of the air, and vapour of the earth, more or less corrupted.

807. A dry *March* and a dry *May*, portend a wholesome summer, if there be a showering *April* between: but otherwise it is a sign of a pestilential year.

808. As the discovery of the disposition of the air is good for the prognosticks of wholesome and unwholesome years; so it is of much more use, for the choice of places to dwell in: at the least, for lodges, and retiring places

for

for health: (for manſion-houſes reſpect proviſions as well as health,) wherein the experiments above-mentioned may ſerve.

809. BUT for the choice of places, or ſeats, it is good to make trial, not only of aptneſs of air to corrupt, but alſo of the moiſture and dryneſs of the air, and the temper of it, in heat or cold; for that may concern health diverſly. We ſee that there be ſome houſes, wherein ſweet meats will relent, and baked meats will mould, more than in others; and wainſcots will alſo ſweat more; ſo that they will almoſt run with water: all which (no doubt) are cauſed chiefly by the moiſtneſs of the air in thoſe ſeats. But becauſe it is better to know it before a man buildeth his houſe than to find it after, take the experiments following.

810. LAY wool, or a ſponge, or bread, in the place you would try, comparing it with ſome other places; and ſee whether it doth not moiſten, and make the wool, or ſponge, *&c.* more ponderous than the other: and if it do, you may judge of that place, as ſituate in a groſs and moiſt air.

811. BECAUSE it is certain, that in ſome places, either by the nature of the earth, or by the ſituation of woods and hills, the air is more unequal than in others; and inequality of air is ever an enemy to health; it were good to take two weather-glaſſes, matches in all things, and to ſet them, for the ſame hours of one day, in ſeveral places, where no ſhade is, nor encloſures; and to mark when you ſet them, how far the water cometh; and to compare them, when you come again, how the water ſtandeth then: and if you find them unequal, you may be ſure that the place where the water is loweſt is in the warmer air, and the other in the colder. And the greater the inequality be, of the aſcent or deſcent of the water, the greater is the inequality of the temper of the air.

812. THE predictions likewiſe of cold and long winters, and hot and dry ſummers, are good to be known; as well for the diſcovery of the cauſes, as for divers proviſions. That of plenty of haws and hips, and briar-berries, hath been ſpoken of before. If wainſcot, or ſtone, that have uſed to ſweat, be more dry in the beginning of winter, or the drops of the eaves of houſes come more ſlowly down than they uſe, it portendeth a hard and froſty winter. The cauſe is, for that it ſheweth an inclination of the air to dry weather; which in winter is ever joined with froſt.

813. GENERALLY a moiſt and a cool ſummer portendeth a hard winter. The cauſe is, for that the vapours of the earth are not diſſipated in the ſummer by the ſun; and ſo they rebound upon the winter.

814. A hot and dry ſummer, and autumn, and eſpecially if the heat and drought extend far into *September*, portendeth an open beginning of winter; and colds to ſucceed toward the latter part of the winter, and the beginning of the ſpring: for till then, the former heat and drought bear the ſway; and the vapours are not ſufficiently multiplied.

815. AN open and warm winter portendeth a hot and dry ſummer: for the vapours diſperſe into the winter ſhowers; whereas cold and froſt keepeth them in, and tranſporteth them into the late ſpring, and ſummer following.

816. BIRDS that uſe to change countries at certain ſeaſons, if they come earlier, do ſhew the temperature of weather, according to that countrey whence they came: as the winter birds, (namely, woodcocks, feldfares, *&c.*) if they come earlier, and out of the northern countries, with us ſhew cold winters. And if it be in the ſame countrey, then they ſhew a temperature of ſeaſon, like unto that ſeaſon in which they come: as ſwallows, bats, cuckoes,

cuckoes, *&c.* that come towards ſummer, if they come early ſhew a hot ſummer to follow.

817. THE prognoſticks, more immediate, of weather to follow ſoon after, are more certain than thoſe of ſeaſons. The reſounding of the ſea upon the ſhore; and the murmur of winds in the woods, without apparent wind, ſhew wind to follow; for ſuch winds breathing chiefly out of the earth, are not at the firſt perceived, except they be pent by water or wood. And therefore a murmur out of caves likewiſe portendeth as much.

818. THE upper regions of the air perceive the collection of the matter of tempeſts and winds, before the air here below: and therefore the obſcuring of the ſmaller ſtars, is a ſign of tempeſt following. And of this kind you ſhall find a number of inſtances in our inquiſition *de ventis*.

819. GREAT mountains have a perception of the diſpoſition of the air to tempeſts, ſooner than the valleys or plains below: and therefore they ſay in *Wales*, when certain hills have their night-caps on, they mean miſchief. The cauſe is, for that tempeſts, which are for the moſt part bred above in the middle region, (as they call it) are ſooneſt perceived to collect in the places next it.

820. THE air, and fire, have ſubtile perceptions of wind riſing, before men find it. We ſee the trembling of a candle will diſcover a wind that otherwiſe we do not feel; and the flexuous burning of flames doth ſhew the air beginneth to be unquiet; and ſo do coals of fire by caſting off the aſhes more than they uſe. The cauſe is, for that no wind at the firſt, till it hath ſtruck and driven the air, is apparent to the ſenſe: but flame is eaſier to move than air: and for the aſhes, it is no marvel, though wind unperceived ſhake them off; for we uſually try which way the wind bloweth, by caſting up graſs, or chaff, or ſuch light things into the air.

821. WHEN wind expireth from under the ſea, as it cauſeth ſome reſounding of the water (whereof we ſpake before) ſo it cauſeth ſome light motions of bubbles, and white circles of froth. The cauſe is, for that the wind cannot be perceived by the ſenſe, until there be an eruption of a great quantity from under the water; and ſo it getteth into a body: whereas in the firſt putting up it cometh in little portions.

822. WE ſpake of the aſhes that coals caſt off; and of graſs and chaff carried by the wind; ſo any light thing that moveth, when we find no wind, ſheweth a wind at hand; as when feathers, or down of thiſtles, fly to and fro in the air.

FOR prognoſticks of weather from living creatures, it is to be noted; that creatures that live in the open air, (*ſub dio*) muſt needs have a quicker impreſſion from the air, than men that live moſt within doors; and eſpecially birds who live in the air freeſt and cleareſt; and are apteſt by their voice to tell tales what they find; and likewiſe by the motion of their flight to expreſs the ſame.

823. WATER-fowls, (as ſea-gulls, moor-hens, *&c.*) when they flock and fly together from the ſea towards the ſhores; and contrariwiſe, land birds, (as crows, ſwallows, *&c.*) when they fly from the land to the waters, and beat the waters with their wings, do foreſhew rain and wind. The cauſe is, pleaſure that both kinds take in the moiſtneſs and denſity of the air; and ſo deſire to be in motion, and upon the wing, whitherſoever they would otherwiſe go: for it is no marvel, that water-fowl do joy moſt in that air, which is likeſt water; and land birds alſo, (many of them) delight in bathing, and moiſt air. For the ſame reaſon alſo, many birds do prune their feathers;

thers; and geese do gaggle; and crows seem to call upon rain: all which is but the comfort they seem to receive in the relenting of the air.

824. THE heron, when she soareth high, (so as sometimes she is seen to pass over a cloud) sheweth winds: but kites flying aloft, shew fair and dry weather. The cause may be, for that they both mount most into the air, of that temper wherein they delight: and the heron being a water-fowl, taketh pleasure in the air that is condensed; and besides, being but heavy of wing, needeth the help of the grosser air. But the kite affecteth not so much the grossness of the air, as the cold and freshness thereof; for being a bird of prey, and therefore hot, she delighteth in the fresh air; and (many times) flyeth against the wind; as trouts and salmons swim against the stream. And yet it is true also, that all birds find an ease in the depth of the air; as swimmers do in a deep water. And therefore when they are aloft, they can uphold themselves with their wings spread, scarce moving them.

825. FISHES, when they play towards the top of the water, do commonly foretel rain. The cause is, for that a fish hating the dry, will not approach the air till it groweth moist; and when it is dry, will fly it, and swim lower.

826. BEASTS do take comfort (generally) in a moist air; and it maketh them eat their meat better: and therefore sheep will get up betimes in the morning to feed against rain; and cattle, and deer, and coneys, will feed hard before rain; and a heifer will put up her nose, and snuff in the air against rain.

827. THE trefoil against rain swelleth in the stalk; and so standeth more upright; for by wet, stalks do erect, and leaves bow down. There is a small red flower in the stubble-fields, which country people call the wincopipe; which if it open in the morning, you may be sure of a fair day to follow.

828. EVEN in men, aches, and hurts, and corns, do engrieve either towards rain, or towards frost: for the one maketh the humours more to abound; and the other maketh them sharper. So we see both extremes bring the gout.

829. WORMS, vermin, *&c.* do foreshew (likewise) rain: for earth-worms will come forth, and moles will cast up more, and fleas bite more, against rain.

830. SOLID bodies likewise foreshew rain. As stones and wainscot when they sweat: and boxes and pegs of wood, when they draw and wind hard; though the former be but from an outward cause; for that the stone, or wainscot, turneth and beateth back the air against itself; but the latter is an inward swelling of the body of the wood itself.

*Experiment solitary touching the nature of appetite in the stomach.*

831. APPETITE is moved chiefly by things that are cold and dry; the cause is, for that cold is a kind of indigence of nature, and calleth upon supply; and so is dryness: and therefore all four things (as vinegar, juice of lemons, oil of vitriol, *&c.*) provoke appetite. And the disease which they call *appetitus caninus*, consisteth in the matter of an acid and glassy phlegm in the mouth of the stomach. Appetite is also moved by four things; for that four things induce a contraction in the nerves, placed in the mouth of the stomach; which is a great cause of appetite. As for the cause why onions, and salt, and pepper, in baked meats, move appetite, it is by vellication of those nerves; for motion whetteth. As for wormwood, olives, capers, and others of that kind which participate of bitterness, they move appetite by abstersion.

So as there be four principal cauſes of appetite; the refrigeration of the ſtomach joined with ſome dryneſs; contraction, vellication, and abſterſion: beſides hunger, which is an emptineſs: and yet over-faſting doth (many times) cauſe the appetite to ceaſe; for that want of meat maketh the ſtomach draw humours; and ſuch humours as are light and cholerick, which quench appetite moſt.

*Experiment ſolitary touching ſweetneſs of odour from the rainbow.*

832. It hath been obſerved by the ancients, that where a rainbow ſeemeth to hang over, or to touch, there breatheth forth a ſweet ſmell. The cauſe is, for that this happeneth but in certain matters, which have in themſelves ſome ſweetneſs; which the gentle dew of the rainbow doth draw forth: and the like do ſoft ſhowers; for they alſo make the ground ſweet: but none are ſo delicate as the dew of the rainbow where it falleth. It may be alſo that the water itſelf hath ſome ſweetneſs: for the rainbow conſiſteth of a glomeration of ſmall drops, which cannot poſſibly fall, but from the air that is very low; and therefore may hold the very ſweetneſs of the herbs and flowers, as a diſtilled water: for rain, and other dew that fall from high, cannot preſerve the ſmell, being diſſipated in the drawing up: neither do we know, whether ſome water itſelf may not have ſome degree of ſweetneſs. It is true, that we find it ſenſibly in no pool, river, nor fountain; but good earth newly turn'd up, hath a freſhneſs and good ſcent; which water, if it be not too equal, (for equal objects never move the ſenſe) may alſo have. Certain it is, that bay-ſalt, which is but a kind of water congeal'd, will ſometimes ſmell like violets.

*Experiment ſolitary touching ſweet ſmells.*

833. To ſweet ſmells heat is requiſite, to concoct the matter; and ſome moiſture to ſpread the breath of them. For heat, we ſee that woods and ſpices are more odorate in the hot countries, than in the cold: for moiſture, we ſee that things too much dried, loſe their ſweetneſs: and flowers growing, ſmell better in a morning, or evening, than at noon. Some ſweet ſmells are deſtroyed by approach to the fire; as violets, wall-flowers, gilly-flowers, pinks; and generally all flowers that have cool and delicate ſpirits. Some continue both on the fire, and from the fire; as roſe-water, *&c.* Some do ſcarce come forth, or at leaſt not ſo pleaſantly, as by means of the fire; as juniper, ſweet gums, *&c.* And all ſmells that are encloſed in a faſt body, but (generally) thoſe ſmells are the moſt grateful, where the degree of heat is ſmall; or where the ſtrength of the ſmell is allayed; for theſe things do rather woo the ſenſe, than ſatiate it. And therefore the ſmell of violets and roſes exceedeth in ſweetneſs that of ſpices and gums: and the ſtrongeſt ſort of ſmells are beſt in a weft afar off.

*Experiment ſolitary touching the corporeal ſubſtance of ſmells.*

834. It is certain, that no ſmell iſſueth, but with emiſſion of ſome corporeal ſubſtance; not as it is in light, and colours, and in ſounds. For we ſee plainly, that ſmell doth ſpread nothing that diſtance that the other do. It is true, that ſome woods of oranges, and heaths of roſemary, will ſmell a great way into the ſea, perhaps twenty miles; but what is that, ſince a peal of ordnance will do as much, which moveth in a ſmall compaſs? Whereas thoſe woods and heaths are of vaſt ſpaces; beſides, we ſee that ſmells do adhere to hard bodies; as in perfuming of gloves, *&c.* which

ſheweth them corporeal; and do laſt a great while, which ſounds and light do not.

*Experiment ſolitary touching fetid and fragrant odours.*

835. THE excrements of moſt creatures ſmell ill; chiefly to the ſame creature that voideth them: for we ſee beſides that of man, that pigeons and horſes thrive beſt, if their houſes and ſtables be kept ſweet; and ſo of cage birds: and the cat burieth that which ſhe voideth: and it holdeth chiefly in thoſe beaſts which feed upon fleſh. Dogs (almoſt) only of beaſts delight in fetid odours; which ſheweth there is ſomewhat in their ſenſe of ſmell, differing from the ſmells of other beaſts. But the cauſe why excrements ſmell ill, is manifeſt; for that the body itſelf rejecteth them; much more the ſpirits: and we ſee that thoſe excrements that are of the firſt digeſtion, ſmell the worſt; as the excrements from the belly: thoſe that are from the ſecond digeſtion leſs ill; as urine: and thoſe that are from the third; yet leſs: for ſweat is not ſo bad as the other two; eſpecially of ſome perſons, that are full of heat. Likewiſe moſt putrefactions are of an odious ſmell: for they ſmell either fetid or mouldy. The cauſe may be, for that putrefaction doth bring forth ſuch a conſiſtence, as is moſt contrary to the conſiſtence of the body whilſt it is ſound: for it is a mere diſſolution of that form. Beſides, there is another reaſon which is profound: and it is, that the objects that pleaſe any of the ſenſes, have (all) ſome equality, and (as it were) order in their compoſition: but where thoſe are wanting, the object is ever ingrate. So mixture of many diſagreeing colours is ever unpleaſant to the eye: mixture of diſcordant ſounds is unpleaſant to the ear: mixture, or hotch-potch of many taſtes, is unpleaſant to the taſte: harſhneſs and ruggedneſs of bodies is unpleaſant to the touch: now it is certain, that all putrefaction being a diſſolution of the firſt form, is a mere confuſion and unformed mixture of the part. Nevertheleſs it is ſtrange, and ſeemeth to croſs the former obſervation, that ſome putrefactions and excrements do yield excellent odours, as civet and muſk; and as ſome think ambergreaſe: for diverſe take it (though improbably) to come from the ſperm of a fiſh: and the moſs we ſpake of from apple-trees, is little better than an excretion. The reaſon may be, for that there paſſeth in the excrements, and remaineth in the putrefactions, ſome good ſpirits; eſpecially where they proceed from creatures that are very hot. But it may be alſo joined with a further cauſe which is more ſubtile; and it is, that the ſenſes love not to be over-pleaſed; but to have a commixture of ſomewhat that is in itſelf ingrate. Certainly, we ſee how diſcords in muſick, falling upon concords, make the ſweeteſt ſtrains: and we ſee again, what ſtrange taſtes delight the taſte; as red herrings, caviary, parmezan, *&c.* And it may be the ſame holdeth in ſmells: for thoſe kind of ſmells that we have mention'd, are all ſtrong, and do pull and vellicate the ſenſe. And we find alſo, that places where men urine, commonly have ſome ſmell of violets: and urine, if one hath eaten nutmeg, hath ſo too.

THE ſlothful, general, and indefinite contemplations, and notions, of the elements and their conjugations; of the influences of heaven; of heat, cold, moiſture, drought, qualities active, paſſive, and the like; have ſwallowed up the true paſſages, and proceſſes, and affects, and conſiſtences of matter and natural bodies. Therefore they are to be ſet aſide, being but notional and ill limited; and definite axioms are to be drawn out of meaſured inſtances: and ſo aſſent to be made to the more general axioms by ſcale. And of theſe kinds of proceſſes of natures, and characters of matter, we will now ſet down ſome inſtances.

*Experiment ſolitary touching the cauſes of putrefaction.*

836. All putrefactions come chiefly from the inward ſpirits of the body; and partly alſo from the ambient body, be it air, liquor, or whatſoever elſe. And this laſt, by two means: either by ingreſs of the ſubſtance of the ambient body into the body putrefied; or elſe by excitation and ſolicitation of the body putrefied, and the parts thereof, by the body ambient. As for the received opinion, that putrefaction is cauſed, either by cold, or peregrine and preternatural heat, it is but nugation: for cold in things inanimate, is the greateſt enemy that is to putrefaction; though it extinguiſheth vivification, which ever conſiſteth in ſpirits attenuate, which the cold doth congeal and coagulate. And as for the peregrine heat, it is thus far true, that if the proportion of the adventine heat be greatly predominant to the natural heat and ſpirits of the body, it tendeth to diſſolution, or notable alteration. But this is wrought by emiſſion, or ſuppreſſion, or ſuffocation, of the native ſpirits; and alſo by the diſordination and diſcompoſure of the tangible parts, and other paſſages of nature, and not by a conflict of heats.

*Experiment ſolitary touching bodies unperfectly mixed.*

837. In verſions, or main alterations of bodies, there is a medium between the body, as it is at firſt, and the body reſulting; which medium is *corpus imperfecte miſtum*, and is tranſitory, and not durable; as miſts, ſmoaks, vapours, *chylus* in the ſtomach, living creatures in the firſt vivification: and the middle action, which produceth ſuch imperfect bodies, is fitly called (by ſome of the ancients) inquination, or inconcoction, which is a kind of putrefaction: for the parts are in confuſion, till they ſettle one way or other.

*Experiment ſolitary touching concoction and crudity.*

838. The word concoction, or digeſtion, is chiefly taken into uſe from living creatures and their organs; and from thence extended to liquors and fruits, *&c.* Therefore they ſpeak of meat concocted; urine and excrements concocted; and the four digeſtions, (in the ſtomach, in the liver, in the arteries and nerves, and in the ſeveral parts of the body,) are likewiſe called concoctions: and they are all made to be the works of heat: all which notions are but ignorant catches of a few things, which are moſt obvious to mens obſervations. The conſtanteſt notion of concoction is, that it ſhould ſignify the degrees of alteration, of one body into another, from crudity to perfect concoction; which is the ultimity of that action or proceſs: and while the body to be converted and altered, is too ſtrong for the efficient that ſhould convert or alter it, (whereby it reſiſteth and holdeth faſt in ſome degree the firſt form or conſiſtence) it is (all that while) crude and inconcoct; and the proceſs is to be called crudity and inconcoction. It is true, that concoction is in great part the work of heat, but not the work of heat alone: for all things that further the converſion, or alteration, (as reſt, mixture of a body already concocted, *&c.*) are alſo means to concoction. And there are of concoction two periods; the one aſſimilation, or abſolute converſion and ſubaction; the other maturation; whereof the former is moſt conſpicuous in the bodies of living creatures; in which there is an abſolute converſion and aſſimilation of the nouriſhment into the body: and likewiſe in the bodies of plants: and again in metals, where there is a full tranſmutation. The other, (which is maturation) is ſeen in liquors and fruits; wherein there is not deſired, nor pretended, an utter converſion, but only an alteration to

that

that form, which is moſt ſought for man's uſe; as in clarifying of drinks, ripening of fruits, *&c.* But note, that there be two kinds of abſolute converſions; the one is, when a body is converted into another body, which was before; as when nouriſhment is turned into fleſh; that is it which we call aſſimilation. The other is, when the converſion is into a body merely new, and which was not before; as if ſilver ſhould be turned to gold, or iron to copper: and this converſion is better called, for diſtinction ſake, tranſmutation.

*Experiment ſolitary touching alterations, which may be called* majors.

839. THERE are alſo divers other great alterations of matter and bodies, beſides thoſe that tend to concoction and maturation; for whatſoever doth ſo alter a body, as it returneth not again to that it was, may be called *alteratio major*; as when meat is boiled, roaſted, or fried, *&c.* or when bread and meat are baked; or when cheeſe is made of curds, or butter of cream, or coals of wood, or bricks of earth; and a number of others. But to apply notions philoſophical to plebeian terms; or to ſay, where the notions cannot fitly be reconciled, that there wanteth a term or nomenclature for it, (as the ancients uſed,) they be but ſhifts of ignorance; for knowledge will be ever a wandering and indigeſted thing, if it be but a commixture of a few notions that are at hand and occur, and not excited from ſufficient number of inſtances, and thoſe well collated.

THE conſiſtences of bodies are very diverſe: denſe, rare, tangible, pneumatical, volatile, fixed; determinate, not determinate; hard, ſoft, cleaving, not cleaving; congelable, not congelable; liquefiable, not liquefiable; fragile, tough; flexible, inflexible; tractile, or to be drawn forth in length, intractile; porous, ſolid; equal and ſmooth, unequal; venous, and fibrous, and with grains, entire; and divers others; all which, to refer to heat, and cold, and moiſture, and drought, is a compendious and inutile ſpeculation. But of theſe ſee principally our *Abecedarium naturae*; and otherwiſe *ſparſim* in this our *Sylva ſylvarum*: nevertheleſs in ſome good part, we ſhall handle divers of them now preſently.

*Experiment ſolitary touching bodies liquefiable, and not liquefiable.*

840. LIQUEFIABLE, and not liquefiable, proceed from theſe cauſes: liquefaction is ever cauſed by the detention of the ſpirits, which play within the body, and open it. Therefore ſuch bodies as are more turgid of ſpirit, or that have their ſpirits more ſtraitly impriſoned; or again, that hold them better pleaſed and content, are liquefiable: for theſe three diſpoſitions of bodies do arreſt the emiſſion of the ſpirits. An example of the firſt two properties is in metals; and of the laſt in greaſe, pitch, ſulphur, butter, wax, *&c.* The diſpoſition not to liquefy proceedeth from the eaſy emiſſion of the ſpirits, whereby the groſſer parts contract; and therefore bodies jejune of ſpirits, or which part with their ſpirits more willingly, are not liquefiable; as wood, clay, free-ſtone, *&c.* But yet even many of thoſe bodies that will not melt, or will hardly melt, will notwithſtanding ſoften; as iron in the forge; and a ſtick bathed in hot aſhes, which thereby becometh more flexible. Moreover there are ſome bodies which do liquefy or diſſolve by fire; as metals, wax, *&c.* and other bodies, which diſſolve in water; as ſalt, ſugar, *&c.* The cauſe of the former proceedeth from the dilatation of the ſpirits by heat: the cauſe of the latter proceedeth from the opening of the tangible parts, which deſire to receive the liquor. Again, there are ſome bodies

dies that diſſolve with both; as gum, &c. And thoſe be ſuch bodies, as on the one ſide have good ſtore of ſpirit; and on the other ſide, have the tangible parts indigent of moiſture; for the former helpeth to the dilating of the ſpirits by the fire; and the latter ſtimulateth the parts to receive the liquor.

*Experiment ſolitary touching bodies fragile and tough.*

841. Of bodies, ſome are fragile; and ſome are tough, and not fragile; and in the breaking, ſome fragile bodies break but where the force is; ſome ſhatter and fly in many places. Of fragility, the cauſe is an impotency to be extended: and therefore ſtone is more fragile than metal; and ſo fictile earth is more fragile than crude earth; and dry wood than green. And the cauſe of this unaptneſs to extenſion, is the ſmall quantity of ſpirits; (for it is the ſpirit that furthereth the extenſion or dilatation of bodies;) and it is ever concomitant with poroſity, and with dryneſs in the tangible parts: contrariwiſe, tough bodies have more ſpirit, and fewer pores, and moiſter tangible parts: therefore we ſee that parchment or leather will ſtretch, paper will not; woollen cloth will tenter, linen ſcarcely.

*Experiment ſolitary touching the two kinds of pneumaticals in bodies.*

842. All ſolid bodies conſiſt of parts of two ſeveral natures, pneumatical and tangible; and it is well to be noted, that the pneumatical ſubſtance is in ſome bodies the native ſpirit of the body, and in ſome other, plain air that is gotten in: as in bodies deſiccate, by heat or age: for in them, when the native ſpirit goeth forth, and the moiſture with it, the air with time getteth into the pores. And thoſe bodies are ever the more fragile; for the native ſpirit is more yielding and extenſive, (eſpecially to follow the parts,) than air. The native ſpirits alſo admit great diverſity; as hot, cold, active, dull, &c. whence proceed moſt of the virtues and qualities (as we call them) of bodies: but the air intermixed is without virtues, and maketh things inſipid, and without any extimulation.

*Experiment ſolitary touching concretion and diſſolution of bodies.*

843. The concretion of bodies is (commonly) ſolved by the contrary; as ice, which is congealed by cold, is diſſolved by heat; ſalt and ſugar, which are excocted by heat, are diſſolved by cold and moiſture. The cauſe is, for that theſe operations are rather returns to their former nature, than alterations; ſo that the contrary cureth. As for oil, it doth neither eaſily congeal with cold, nor thicken with heat. The cauſe of both effects, though they be produced by contrary efficients, ſeemeth to be the ſame; and that is, becauſe the ſpirit of the oil, by either means, exhaleth little, for the cold keepeth it in; and the heat, (except it be vehement,) doth not call it forth. As for cold, though it take hold of the tangible parts, yet as to the ſpirits, it doth rather make them ſwell than congeal them: as when ice is congealed in a cup, the ice will ſwell inſtead of contracting, and ſometimes rift.

*Experiment ſolitary touching hard and ſoft bodies.*

844. Of bodies, ſome (we ſee) are hard, and ſome ſoft: the hardneſs is cauſed (chiefly) by the jejuneneſs of the ſpirits, and their imparity with the tangible parts: both which, if they be in a greater degree, make them not only hard, but fragile and leſs enduring of preſſure; as ſteel, ſtone, glaſs, dry wood, &c. Softneſs cometh (contrariwiſe) by the greater quantity of

of ſpirits, (which ever helpeth to induce yielding and ceſſion,) and by the more equal ſpreading of the tangible parts, which thereby are more ſliding and following; as in gold, lead, wax, *&c.* But note, that ſoft bodies, (as we uſe the word) are of two kinds; the one, that eaſily giveth place to another body, but altereth not bulk, by riſing in other places: and therefore we ſee that wax, if you put any thing into it, doth not riſe in bulk, but only giveth place: for you may not think, that in printing of wax, the wax riſeth up at all; but only the depreſſed part giveth place, and the other remaineth as it was. The other that altereth bulk in the ceſſion, as water, or other liquors, if you put a ſtone or any thing into them, they give place (indeed) eaſily, but then they riſe all over; which is a falſe ceſſion; for it is in place, and not in body.

*Experiment ſolitary touching bodies ductile and tenſile.*

845. ALL bodies ductile and tenſile, (as metals) that will be drawn into wires; wool and tow that will be drawn into yarn or thread, have in them the appetite of not diſcontinuing ſtrong, which maketh them follow the force that pulleth them out; and yet ſo, as not to diſcontinue or forſake their own body. Viſcous bodies, (likewiſe) as pitch, wax, bird-lime, cheeſe toaſted, will draw forth and rope. But the difference between bodies fibrous, and bodies viſcous, is plain; for all wool, and tow, and cotton, and ſilk (eſpecially raw-ſilk) have, beſides their deſire of continuance, in regard of the tenuity of their thread, a greedineſs of moiſture; and by moiſture to join and incorporate with other thread; eſpecially if there be a little wreathing; as appeareth by the twiſting of thread, and the practice of twirling about of ſpindles. And we ſee alſo, that gold and ſilver thread cannot be made without twiſting.

*Experiment ſolitary touching other paſſions of matter, and characters of bodies.*

846. THE differences of impreſſible and not impreſſible, figurable and not figurable; mouldable, and not mouldable; ſciſſible and not ſciſſible; and many other paſſions of matter, are plebeian notions, applied unto the inſtruments and uſes which men ordinarily practiſe; but they are all but the effects of ſome of theſe cauſes following; which we will enumerate without applying them, becauſe that will be too long. The firſt is the ceſſion or not ceſſion of bodies, into a ſmaller ſpace or room, keeping the outward bulk, and not flying up. The ſecond is the ſtronger or weaker appetite in bodies to continuity, and to fly diſcontinuity. The third is the diſpoſition of bodies to contract and not contract: and again, to extend or not extend. The fourth is the ſmall quantity, or great quantity of the pneumatical in bodies. The fifth is the nature of the pneumatical, whether it be native ſpirit of the body, or common air. The ſixth is, the nature of the native ſpirits in the body, whether they be active and eager, or dull and gentle. The ſeventh is the emiſſion or detention of the ſpirits in bodies. The eighth is the dilatation, or contraction of the ſpirits in bodies, while they are detained. The ninth is the collocation of the ſpirits in bodies, whether the collocation be equal or unequal; and again, whether the ſpirits be coacervate or diffuſed. The tenth is the denſity or rarity of the tangible parts. The eleventh is the equality or inequality of the tangible parts. The twelfth is the digeſtion or crudity of the tangible parts. The thirteenth is the nature of the matter, whether ſulphureous or mercurial, watery or oily, dry and terreſtrial, or moiſt and liquid; which natures of ſulphureous and mercurial, ſeem to be

natures

natures radical and principal. The fourteenth is the placing of the tangible parts in length or tranſverſe; (as it is in the warp and the woof of textiles) more inward, or more outward, *&c.* The fifteenth is the poroſity or imporoſity betwixt the tangible parts, and the greatneſs or ſmallneſs of the pores. The ſixteenth is the collocation and poſture of the pores. There may be more cauſes; but theſe do occur for the preſent.

*Experiment ſolitary touching induration by ſympathy.*

847. Take lead and melt it, and in the midſt of it, when it beginneth to congeal, make a little dint or hole, and put quickſilver wrapped in a piece of linen into that hole, and the quickſilver will fix and run no more, and endure the hammer. This is a noble inſtance of induration, by conſent of one body with another, and motion of excitation to imitate; for to aſcribe it only to the vapour of lead, is leſs probable. *Quaere*, whether the fixing may be in ſuch a degree, as it will be figured like other metals? For if ſo, you may make works of it for ſome purpoſes, ſo they come not near the fire.

*Experiment ſolitary touching honey and ſugar.*

848. Sugar hath put down the uſe of honey, inſomuch as we have loſt thoſe obſervations and preparations of honey which the ancients had, when it was more in price. Firſt, it ſeemeth that there was in old time tree-honey, as well as bee-honey, which was the tear or blood iſſuing from the tree: inſomuch as one of the ancients relateth, that in *Trebiſond* there was honey iſſuing from the box-trees, which made men mad. Again, in ancient time there was a kind of honey, which either of its own nature, or by art, would grow as hard as ſugar, and was not ſo luſcious as ours. They had alſo a wine of honey, which they made thus. They cruſhed the honey into a great quantity of water, and then ſtrained the liquor; after they boiled it in a copper to the half; then they poured it into earthen veſſels for a ſmall time; and after turned it into veſſels of wood, and kept it for many years. They have alſo at this day, in *Ruſſia*, and thoſe northern countries, mead-ſimple, which (well made and ſeaſoned) is a good wholeſome drink, and very clear. They uſe alſo in *Wales* a compound drink of mead, with herbs and ſpices. But mean while it were good, in recompence of that we have loſt in honey, there were brought in uſe a ſugar mead, (for ſo we may call it,) tho' without any mixture at all of honey; and to brew it, and keep it ſtale, as they uſe mead: for certainly, though it would not be ſo abſterſive, and opening, and ſolutive a drink as mead; yet it will be more grateful to the ſtomach, and more lenitive, and fit to be uſed in ſharp diſeaſes: for we ſee, that the uſe of ſugar in beer and ale, hath good effects in ſuch caſes.

*Experiment ſolitary touching the finer ſort of baſe metals.*

849. It is reported by the ancients, that there was a kind of ſteel in ſome places, which would poliſh almoſt as white and bright as ſilver. And that there was in *India* a kind of braſs, which (being poliſhed) could ſcarce be diſcerned from gold. This was in the natural ure; but I am doubtful, whether men have ſufficiently refined metals, which we count baſe; as whether iron, braſs, and tin be refined to the height? But when they come to ſuch a fineneſs, as ſerveth the ordinary uſe, they try no farther.

*Experiment ſolitary touching cements and quarries.*

850. There having been found certain cements under earth that are very ſoft;

ſoft; and yet, taken forth into the ſun, harden as hard as marble: there are alſo ordinary quarries in *Somerſetſhire*, which in the quarry cut ſoft to any bigneſs, and in the building prove firm and hard.

*Experiment ſolitary touching the altering of the colour of hairs and feathers.*

851. LIVING creatures (generally) do change their hair with age, turning to be grey and white: as is ſeen in men, though ſome earlier, ſome later; in horſes that are dappled, and turn white; in old ſquirrels that turn griſly; and many others. So do ſome birds; as cygnets from grey turn white; hawks from brown turn more white. And ſome birds there be that upon their moulting do turn colour; as robin-red-breaſts, after their moulting, grow to be red again by degrees; ſo do goldfinches upon the head. The cauſe is, for that moiſture doth (chiefly) colour hair and feathers; and dryneſs turneth them grey and white; now hair in age waxeth dryer: ſo do feathers. As for feathers, after moulting, they are young feathers, and ſo all one as the feathers of young birds. So the beard is younger than the hair of the head, and doth (for the moſt part) wax hoary later. Out of this ground a man may deviſe the means of altering the colour of birds, and the retardation of hoary-hairs. But of this ſee the fifth experiment.

*Experiment ſolitary touching the differences of living creatures, male and female.*

852. THE difference between male and female, in ſome creatures, is not to be diſcerned, otherwiſe than in the parts of generation: as in horſes and mares, dogs and bitches, doves he and ſhe, and others. But ſome differ in magnitude, and that diverſly; for in moſt the male is the greater; as in man, pheaſants, peacocks, turkeys, and the like: and in ſome few, as in hawks, the female. Some differ in the hair and feathers, both in the quantity, criſpation and colours of them; as he-lions are hirſute, and have great mains: the ſhes are ſmooth like cats. Bulls are more criſp upon the forehead than cows; the peacock, and pheaſant-cock, and goldfinch-cock, have glorious and fine colours; the hens have not. Generally the hes in birds have the faireſt feathers. Some differ in divers feathers; as bucks have horns, does none; rams have more wreathed horns than ewes; cocks have great combs and ſpurs, hens little or none; boars have great fangs, ſows much leſs: The turkey-cock hath great and ſwelling gills, the hen hath leſs; men have generally deeper and ſtronger voices than women. Some differ in faculty; as the cocks amongſt ſinging-birds are the beſt ſingers. The chief cauſe of all theſe (no doubt) is, for that the males have more ſtrength of heat than the females; which appeareth manifeſtly in this, that all young creatures males are like females; and ſo are eunuchs, and gelt creatures of all kinds, liker females. Now heat cauſeth greatneſs of growth, generally, where there is moiſture enough to work upon: but if there be found in any creature, (which is ſeen rarely) an over-great heat in proportion to the moiſture, in them the female is the greater; as in hawks and ſparrows. And if the heat be balanced with the moiſture, then there is no difference to be ſeen between male and female; as in the inſtances of horſes and dogs. We ſee alſo, that the horns of oxen and cows, for the moſt part, are larger than the bulls; which is cauſed by abundance of moiſture, which in the horns of the bull faileth. Again, heat cauſeth piloſity and criſpation, and ſo likewiſe beards in men. It alſo expelleth finer moiſture, which want of heat cannot expel; and that is the cauſe of the beauty and variety of feathers. Again,

heat doth put forth many excreſcences, and much ſolid matter, which want of heat cannot do: and this is the cauſe of horns, and of the greatneſs of them; and of the greatneſs of the combs and ſpurs of cocks, gills of turkey-cocks, and fangs of boars. Heat alſo dilateth the pipes and organs, which cauſeth the deepneſs of the voice. Again, heat refineth the ſpirits, and that cauſeth the cock-ſinging-bird to excel the hen.

*Experiment ſolitary touching the comparative magnitude of living creatures.*

853. There be fiſhes greater than any beaſts; as the whale is far greater than the elephant: and beaſts are (generally) greater than birds. For fiſhes, the cauſe may be, that becauſe they live not in the air, they have not their moiſture drawn and ſoaked by the air and ſun-beams. Alſo they reſt always in a manner, and are ſupported by the water; whereas motion and labour do conſume. As for the greatneſs of beaſts, more than of birds, it is cauſed, for that beaſts ſtay longer time in the womb than birds, and there nouriſh and grow; whereas in birds, after the egg lay'd, there is no further growth or nouriſhment from the female; for the ſitting doth vivify, and not nouriſh.

*Experiment ſolitary touching exoſſation of fruits.*

854. We have partly touched before the means of producing fruits without cores or ſtones. And this we add farther, that the cauſe muſt be abundance of moiſture; for that the core and ſtone are made of a dry ſap: and we ſee, that it is poſſible to make a tree put forth only in bloſſom, without fruit; as in cherries with double flowers; much more in fruit without ſtone or cores. It is reported, that a cion of an apple, grafted upon a colewort-ſtalk, ſendeth forth a great apple without a core. It is not unlikely, that if the inward pith of a tree were taken out, ſo that the juice came only by the bark, it would work the effect. For it hath been obſerved, that in pollards, if the water get in on the top, and they become hollow, they put forth the more. We add alſo, that it is delivered for certain by ſome, that if the cion be grafted the ſmall end downwards, it will make fruit have little or no cores and ſtones.

*Experiment ſolitary touching the melioration of tobacco.*

855. Tobacco is a thing of great price, if it be in requeſt: for an acre of it will be worth (as is affirmed) two hundred pounds by the year towards charge. The charge of making the ground, and otherwiſe is great, but nothing to the profit; but the *Engliſh* tobacco hath ſmall credit, as being too dull and earthy: nay, the *Virginian* tobacco, though that be in a hotter climate, can get no credit, for the ſame cauſe: ſo that a trial to make tobacco more aromatical, and better concocted here in *England*, were a thing of great profit. Some have gone about to do it by drenching the *Engliſh* tobacco in a decoction or infuſion of *Indian* tobacco: but thoſe are but ſophiſtication and toys; for nothing that is once perfect, and hath run its race, can receive much amendment. You muſt ever reſort to the beginnings of things for melioration. The way of maturation of tobacco muſt, as in other plants, be from the heat either of the earth, or of the ſun: we ſee ſome leading of this in muſkmelons, which are ſown upon a hot bed dunged below, upon a bank turned upon the ſouth ſun, to give heat by reflexion; laid upon tiles, which increaſeth the heat, and covered with ſtraw to keep them from cold. They remove them alſo, which addeth ſome life: and by theſe

helps

helps they become as good in *England*, as in *Italy* or *Provence*. Theſe, and the like means, may be tried in tobacco. Enquire alſo of the ſteeping of roots, in ſome ſuch liquor as may give them vigour to put forth ſtrong.

*Experiment ſolitary touching ſeveral heats working the ſame effects.*

856. HEAT of the ſun for the maturation of fruits; yea, and the heat of vivification of living creatures, are both repreſented and ſupplied by the heat of fire; and likewiſe the heats of the ſun, and life, are repreſented one by the other. Trees ſet upon the backs of chimneys do ripen fruit ſooner. Vines, that have been drawn in at the window of a kitchen, have ſent forth grapes ripe a month (at leaſt) before others. Stoves at the back of walls bring forth oranges here with us. Eggs, as is reported by ſome, have been hatched in the warmth of an oven. It is reported by the ancients, that the oſtrich layeth her eggs under ſand, where the heat of the ſun diſcloſeth them.

*Experiment ſolitary touching ſwelling and dilatation in boiling.*

857. BARLEY in the boiling ſwelleth not much; wheat ſwelleth more; rice extremely; inſomuch as a quarter of a pint (unboiled) will ariſe to a pint boiled. The cauſe (no doubt) is, for that the more cloſe and compact the body is, the more it will dilate: now barley is the moſt hollow; wheat more ſolid than that; and rice moſt ſolid of all. It may be alſo that ſome bodies have a kind of lentour, and more depertible nature than others; as we ſee it evident in coloration; for a ſmall quantity of ſaffron will tinct more than a very great quantity of braſil or wine.

*Experiment ſolitary touching the dulcoration of fruits.*

858. FRUIT groweth ſweet by rolling, or preſſing them gently with the hand; as rolling pears, damaſcenes, *&c.* by rottenneſs; as medlars, ſervices, ſloes, hips, *&c.* by time; as apples, wardens, pomgranates, *&c.* by certain ſpecial maturations; as by laying them in hay, ſtraw, *&c.* and by fire; as in roaſting, ſtewing, baking, *&c.* The cauſe of the ſweetneſs by rolling and preſſing, is emollition, which they properly induce; as in beating of ſtock-fiſh, fleſh, *&c.* By rottenneſs is, for that the ſpirits of the fruit, by putrefaction gather heat, and thereby digeſt the harder parts, for in all putrefactions there is a degree of heat: By time and keeping is, becauſe the ſpirits of the body do ever feed upon the tangible parts, and attenuate them: By ſeveral maturations is, by ſome degree of heat: And by fire is, becauſe it is the proper work of heat to refine, and to incorporate; and all fourneſs conſiſteth in ſome groſſineſs of the body: and all incorporation doth make the mixture of the body more equal in all the parts; which ever induceth a milder taſte.

*Experiment ſolitary touching fleſh edible, and not edible.*

859. OF fleſhes, ſome are edible; ſome, except it be in famine, not. For thoſe that are not edible, the cauſe is, for that they have (commonly) too much bitterneſs of taſte; and therefore thoſe creatures, which are fierce and cholerick, are not edible; as lions, wolves, ſquirrels, dogs, foxes, horſes, *&c.* As for kine, ſheep, goats, deer, ſwine, coneys, hares, *&c.* we ſee they are mild and fearful. Yet it is true, that horſes, which are beaſts of courage, have been, and are eaten by ſome nations; as the *Scythians* were called *Hippophagi*; and the *Chineſes* eat horſe-fleſh at this day; and ſome gluttons have

uſed to have colts-fleſh baked. In birds, ſuch as are *carnivorae*, and birds of prey, are commonly no good meat; but the reaſon is, rather the cholerick nature of thoſe birds, than their feeding upon fleſh: for pewets, gulls, ſhovelers, ducks, do feed upon fleſh, and yet are good meat. And we ſee, that thoſe birds which are of prey, or feed upon fleſh, are good meat, when they are very young; as hawks, rooks out of the neſt, owls, *&c.* man's fleſh is not eaten. The reaſons are three: firſt, becauſe men in humanity do abhor it: ſecondly, becauſe no living creature that dieth of it ſelf is good to eat: and therefore the canibals (themſelves) eat no man's fleſh, of thoſe that die of themſelves, but of ſuch as are ſlain. The third is, becauſe there muſt be (generally) ſome diſparity between the nouriſhment and the body nouriſhed; and they muſt not be over-near, or like: yet we ſee, that in great weakneſſes and conſumptions, men have been ſuſtained with woman's milk: and *Ficinus* fondly (as I conceive) adviſeth, for the prolongation of life, that a vein be opened in the arm of ſome wholeſome young man, and the blood to be ſucked. It is ſaid, that witches do greedily eat man's fleſh; which if it be true, beſides a deviliſh appetite in them, it is likely to proceed, for that man's fleſh may ſend up high and pleaſing vapours, which may ſtir the imagination; and witches felicity is chiefly in imagination, as hath been ſaid.

*Experiment ſolitary touching the ſalamander.*

860. THERE is an ancient received tradition of the ſalamander, that it liveth in the fire, and hath force alſo to extinguiſh the fire. It muſt have two things, if it be true, to this operation: the one a very cloſe ſkin, whereby flame, which in the midſt is not ſo hot, cannot enter; for we ſee that if the palm of the hand be anointed thick with white of egg, and then *aqua vitae* be poured upon it and enflamed, yet one may endure the flame a pretty while. The other is ſome extreme cold, and quenching virtue in the body of that creature, which choaketh the fire. We ſee that milk quencheth wild fire better than water, becauſe it entreth better.

*Experiment ſolitary touching the contrary operations of time upon fruits and liquors.*

861. TIME doth change fruits (as apples, pears, pomgranates, *&c.*) from more ſour to more ſweet: but contrariwiſe liquors (even thoſe that are of the juice of fruit) from more ſweet to more ſour; as wort, muſte, new verjuice, *&c.* The cauſe is, the congregation of the ſpirits together: for in both kinds the ſpirit is attenuated by time; but in the firſt kind it is more diffuſed, and more maſtered by the groſſer parts, which the ſpirits do but digeſt: but in drinks the ſpirits do reign, and finding leſs oppoſition of the parts, become themſelves more ſtrong; which cauſeth alſo more ſtrength in the liquor: ſuch, as if the ſpirits be of the hotter ſort, the liquor becometh apt to burn; but in time, it cauſeth likewiſe, when the higher ſpirits are evaporated, more ſourneſs.

*Experiment ſolitary touching blows and bruiſes.*

862. IT hath been obſerved by the ancients, that plates of metal, and eſpecially of braſs, applied preſently to a blow, will keep it down from ſwelling. The cauſe is repercuſſion, without humectation, or entrance of any body: for the plate hath only a virtual cold, which doth not ſearch into the hurt; whereas all plaiſters and ointments do enter. Surely, the cauſe that blows and bruiſes induce ſwellings, is, for that the ſpirits reſorting to

ſuccour

ſuccour the part that laboureth, draw alſo the humours with them: for we ſee, that it is not the repulſe and the return of the humour in the parts ſtrucken that cauſeth it; for that gouts and tooth-aches cauſe ſwelling, where there is no percuſſion at all.

*Experiment ſolitary touching the orrice root.*

863. THE nature of the orrice root is almoſt ſingular; for there be few odoriferous roots; and in thoſe that are in any degree ſweet, it is but the ſame ſweetneſs with the wood or leaf: but the orrice is not ſweet in the leaf: neither is the flower any thing ſo ſweet as the root. The root ſeemeth to have a tender dainty heat; which when it cometh above ground to the ſun and the air, vaniſheth: for it is a great mollifier; and hath a ſmell like a violet.

*Experiment ſolitary touching the compreſſion of liquors.*

864. IT hath been obſerved by the ancients, that a great veſſel full, drawn into bottles; and then the liquor put again into the veſſel; will not fill the veſſel again ſo full as it was, but that it may take in more liquor: and that this holdeth more in wine than in water. The cauſe may be trivial; namely, by the expence of the liquor, in regard ſome may ſtick to the ſides of the bottles: but there may be a cauſe more ſubtile; which is, that the liquor in the veſſel is not ſo much compreſſed as in the bottle; becauſe in the veſſel the liquor meeteth with liquor chiefly; but in the bottles a ſmall quantity of liquor meeteth with the ſides of the bottles, which compreſs it ſo that it doth not open again.

*Experiment ſolitary touching the working of water upon air contiguous.*

865. WATER, being contiguous with air, cooleth it, but moiſteneth it not, except it vapour. The cauſe is, for that heat and cold have a virtual tranſition, without communication of ſubſtance; but moiſture not: and to all madefaction there is required an imbibition: but where the bodies are of ſuch ſeveral levity and gravity as they mingle not, there can follow no imbibition. And therefore, oil likewiſe lieth at the top of the water without commixture: and a drop of water running ſwiftly over a ſtraw or ſmooth body, wetteth not.

*Experiment ſolitary touching the nature of air.*

866. STAR-light nights, yea and bright moon-ſhine nights, are colder than cloudy nights. The cauſe is, the dryneſs and fineneſs of the air, which thereby becometh more piercing and ſharp; and therefore great continents are colder than iſlands: and as for the moon, though it ſelf inclineth the air to moiſture, yet when it ſhineth bright, it argueth the air is dry. Alſo cloſe air is warmer than open air; which (it may be) is, for that the true cauſe of cold is an expiration from the globe of the earth, which in open places is ſtronger; and again, air it ſelf, if it be not altered by that expiration, is not without ſome ſecret degree of heat; as it is not likewiſe without ſome ſecret degree of light: for otherwiſe cats and owls could not ſee in the night; but that air hath a little light, proportionable to the viſual ſpirits of thoſe creatures.

*Experiments in conſort touching the eyes and ſight.*

867. THE eyes do move one and the ſame way; for when one eye moveth

to the noſtril, the other moveth from the noſtril. The cauſe is motion of conſent, which in the ſpirits and parts ſpiritual is ſtrong. But yet uſe will induce the contrary; for ſome can ſquint when they will: and the common tradition is, that if children be ſet upon a table with a candle behind them, both eyes will move outwards; as affecting to ſee the light, and ſo induce ſquinting.

868. We ſee more exquiſitely with one eye ſhut, than with both open. The cauſe is, for that the ſpirits viſual unite themſelves more, and ſo become ſtronger. For you may ſee, by looking in a glaſs, that when you ſhut one eye, the pupil of the other eye that is open, dilateth.

869. The eyes, if the ſight meet not in one angle, ſee things double. The cauſe is, for that ſeeing two things, and ſeeing one thing twice; worketh the ſame effect: and therefore a little pellet held between two fingers laid acroſs, ſeemeth double.

870. Pore-blind men ſee beſt in the dimmer light; and likewiſe have their ſight ſtronger near hand, than thoſe that are not pore-blind; and can read and write ſmaller letters. The cauſe is, for that the ſpirits viſual in thoſe that are pore-blind, are thinner and rarer than in others; and therefore the greater light diſperſeth them. For the ſame cauſe they need contracting; but being contracted, are more ſtrong than the viſual ſpirits of ordinary eyes are; as when we ſee through a level, the ſight is the ſtronger; and ſo is it when you gather the eye-lids ſomewhat cloſe: and it is commonly ſeen in thoſe that are pore-blind, that they do much gather the eye-lids together. But old men, when they would ſee to read, put the paper ſomewhat afar off: The cauſe is, for that old men's ſpirits viſual, contrary to thoſe of pore-blind men, unite not, but when the object is at ſome good diſtance from their eyes.

871. Men ſee better, when their eyes are over-againſt the ſun, or a candle, if they put their hand a little before their eye. The reaſon is, for that the glaring of the ſun, or the candle, doth weaken the eye; whereas the light circumfuſed is enough for the perception. For we ſee, that an overlight maketh the eyes dazzle; inſomuch as perpetual looking againſt the ſun would cauſe blindneſs. Again, if men come out of a great light into a dark room; and contrariwiſe, if they come out of a dark room into a light room, they ſeem to have a miſt before their eyes, and ſee worſe than they ſhall do, after they have ſtayed a little while, either in the light, or in the dark. The cauſe is, for that the ſpirits viſual are upon a ſudden change, diſturbed and put out of order; and till they be recollected, do not perform their function well. For when they are much dilated by light, they cannot contract ſuddenly; and when they are much contracted by darkneſs, they cannot dilate ſuddenly. And exceſs of both theſe, (that is, of the dilatation and contraction of the ſpirits viſual) if it be long, deſtroyeth the eye. For as long looking againſt the ſun, or fire, hurteth the eye by dilatation; ſo curious painting in ſmall volumes, and reading of ſmall letters, do hurt the eye by contraction.

872. It hath been obſerved, that in anger the eyes wax red; and in bluſhing, not the eyes, but the ears, and the parts behind them. The cauſe is, for that in anger the ſpirits aſcend and wax eager: which is moſt eaſily ſeen in the eyes, becauſe they are tranſlucid; though withal it maketh both the cheeks and the gills red; but in bluſhing, it is true the ſpirits aſcend likewiſe to ſuccour both the eyes and the face, which are the parts that labour: but then they are repulſed by the eyes, for that the eyes in ſhame do

do put back the ſpirits that aſcend to them, as unwilling to look abroad: for no man in that paſſion doth look ſtrongly, but dejectedly; and that repulſion from the eyes, diverteth the ſpirits and heat more to the ears, and the parts by them.

873. THE objects of the ſight may cauſe a great pleaſure and delight in the ſpirits, but no pain, or great offence; except it be by memory, as hath been ſaid. The glimpſes and beams of diamonds that ſtrike the eye; *Indian* feathers, that have glorious colours; the coming into a fair garden; the coming into a fair room richly furniſhed; a beautiful perſon; and the like; do delight and exhilarate the ſpirits much. The reaſon why it holdeth not in the offence, is, for that the ſight is moſt ſpiritual of the ſenſes; whereby it hath no object groſs enough to offend it. But the cauſe (chiefly) is, for that there be no active objects to offend the eye. For harmonical ſounds, and diſcordant ſounds, are both active and poſitive: ſo are ſweet ſmells and ſtinks: ſo are bitter and ſweet in taſtes: ſo are over-hot and over-cold in touch: but blackneſs and darkneſs are indeed but privatives; and therefore have little or no activity. Somewhat they do contriſtate, but very little.

*Experiment ſolitary touching the colour of the ſea, or other water.*

874. WATER of the ſea, or otherwiſe, looketh blacker when it is moved, and whiter when it reſteth. The cauſe is, for that by means of the motion, the beams of light paſs not ſtraight, and therefore muſt be darkened; whereas, when it reſteth, the beams do paſs ſtraight. Beſides, ſplendor hath a degree of whiteneſs; eſpecially if there be a little repercuſſion: for a looking-glaſs with the ſteel behind, looketh whiter than glaſs ſimple. This experiment deſerveth to be driven farther, in trying by what means motion may hinder ſight.

*Experiment ſolitary touching ſhell-fiſh.*

875. SHELL-fiſh have been, by ſome of the ancients, compared and ſorted with the *inſecta*; but I ſee no reaſon why they ſhould; for they have male and female as other fiſh have: neither are they bred of putrefaction; eſpecially ſuch as do move. Nevertheleſs it is certain, that oiſters, and cockles, and muſcles, which move not, have not diſcriminate ſex. *Quaere* in what time, and how they are bred? It ſeemeth that ſhells of oiſters are bred where none were before; and it is tried, that the great horſe-muſcle, with the fine ſhell, that breedeth in ponds, hath bred within thirty years: but then, which is ſtrange, it hath been tried, that they do not only gape and ſhut as the oiſters do, but remove from one place to another.

*Experiment ſolitary touching the right ſide and the left.*

876. THE ſenſes are alike ſtrong, both on the right ſide and on the left; but the limbs on the right ſide are ſtronger. The cauſe may be, for that the brain, which is the inſtrument of ſenſe, is alike on both ſides; but motion, and habilities of moving, are ſomewhat holpen from the liver, which lieth on the right ſide. It may be alſo, for that the ſenſes are put in exerciſe indifferently on both ſides from the time of our birth; but the limbs are uſed moſt on the right ſide, whereby cuſtom helpeth; for we ſee, that ſome are left-handed; which are ſuch as have uſed the left hand moſt.

*Experiment ſolitary touching frictions.*

877. FRICTIONS make the parts more fleſhy and full; as we ſee both in men, and in the currying of horſes, *&c.* The cauſe is, for that they draw greater quantity of ſpirits and blood to the parts: and again, becauſe they draw the aliment more forcibly from within: and again, becauſe they relax the pores, and ſo make better paſſage for the ſpirits, blood and aliment: laſtly, becauſe they diſſipate and digeſt any inutile or excrementitious moiſture, which lieth in the fleſh; all which help aſſimilation. Frictions alſo do more fill and impinguate the body than exerciſe. The cauſe is, for that in frictions the inward parts are at reſt; which in exerciſes are beaten (many times) too much: and for the ſame reaſon, (as we have noted heretofore,) gally-ſlaves are fat and fleſhy, becauſe they ſtir the limbs more, and the inward parts leſs.

*Experiment ſolitary touching globes appearing flat at diſtance.*

878. ALL globes afar off appear flat. The cauſe is, for that diſtance, being a ſecondary object of ſight, is not otherwiſe diſcerned, than by more or leſs light; which diſparity, when it cannot be diſcerned, all ſeemeth one: as it is (generally) in objects not diſtinctly diſcerned; for ſo letters, if they be ſo far off as they cannot be diſcerned, ſhew but as a duſkiſh paper: and all engravings and emboſſings (afar off) appear plain.

*Experiment ſolitary touching ſhadows.*

879. THE uttermoſt parts of ſhadows ſeem ever to tremble. The cauſe is, for that the little motes which we ſee in the ſun do ever ſtir, tho' there be no wind; and therefore thoſe moving, in the meeting of the light and the ſhadow, from the light to the ſhadow, and from the ſhadow to the light, do ſhew the ſhadow to move, becauſe the medium moveth.

*Experiment ſolitary touching the rolling and breaking of the ſeas.*

880. SHALLOW and narrow ſeas, break more than deep and large. The cauſe is, for that the impulſion being the ſame in both; where there is greater quantity of water, and likewiſe ſpace enough, there the water rolleth and moveth, both more ſlowly, and with a ſloper riſe and fall: but where there is leſs water, and leſs ſpace, and the water daſheth more againſt the bottom, there it moveth more ſwiftly, and more in precipice; for in the breaking of the waves there is ever a precipice.

*Experiment ſolitary touching the dulcoration of ſalt water.*

881. IT hath been obſerved by the ancients, that ſalt water boiled, or boiled and cooled again, is more potable, than of it ſelf raw: And yet the taſte of ſalt in diſtillations by fire riſeth not, for the diſtilled water will be freſh. The cauſe may be, for that the ſalt part of the water doth partly riſe into a kind of ſcum on the top, and partly goeth into a ſediment in the bottom; and ſo is rather a ſeparation than an evaporation. But it is too groſs to riſe into a vapour; and ſo is a bitter taſte likewiſe; for ſimple diſtilled waters, of wormwood, and the like, are not bitter.

*Experiment ſolitary touching the return of ſaltneſs in pits upon the ſea-ſhore.*

882. IT hath been ſet down before, that pits upon the ſea-ſhore turn into freſh water, by percolation of the ſalt through the ſand: but it is farther noted,

noted, by ſome of the ancients, that in ſome places of *Africa*, after a time, the water in ſuch pits will become brackiſh again. The cauſe is, for that after a time, the very ſands through which the ſalt water paſſeth, become ſalt; and ſo the ſtrainer it ſelf is tincted with ſalt. The remedy therefore is, to dig ſtill new pits, when the old wax brackiſh; as if you would change your ſtrainer.

*Experiment ſolitary touching attraction by ſimilitude of ſubſtance.*

883. IT hath been obſerved by the ancients, that ſalt water will diſſolve ſalt put into it in leſs time than freſh water will diſſolve it. The cauſe may be, for that the ſalt in the precedent water doth, by ſimilitude of ſubſtance, draw the ſalt new put in unto it; whereby it diffuſeth in the liquor more ſpeedily. This is a noble experiment, if it be true, for it ſheweth means of more quick and eaſy infuſions; and it is likewiſe a good inſtance of attraction, by ſimilitude of ſubſtance. Try it with ſugar put into water formerly ſugar'd and into other water unſugar'd.

*Experiment ſolitary touching attraction.*

884. PUT ſugar into wine, part of it above, part under the wine, and you ſhall find (that which may ſeem ſtrange) that the ſugar above the wine will ſoften and diſſolve ſooner than that within the wine. The cauſe is, for that the wine entereth that part of the ſugar which is under the wine, by ſimple infuſion or ſpreading; but that part above the wine is likewiſe forced by ſucking; for all ſpongy bodies expel the air and draw in liquor, if it be contiguous: as we ſee it alſo in ſponges put part above the water. It is worthy the enquiry, to ſee how you may make more accurate infuſions, by help of attraction.

*Experiment ſolitary touching heat under earth.*

885. WATER in wells is warmer in winter than in ſummer; and ſo air in caves. The cauſe is, for that in the higher parts, under the earth, there is a degree of ſome heat; (as appeareth in ſulphureous veins, *&c.*) which ſhut cloſe in, (as in winter,) is the more; but if it perſpire, (as it doth in ſummer,) it is the leſs.

*Experiment ſolitary touching flying in the air.*

886. IT is reported, that amongſt the *Leucadians*, in ancient time, upon a ſuperſtition they did uſe to precipitate a man from a high cliff into the ſea; tying about him with ſtrings, at ſome diſtance, many great fowls; and fixing unto his body divers feathers, ſpread, to break the fall. Certainly many birds of good wing, (as kites, and the like,) would bear up a good weight as they fly; and ſpreading of feathers thin and cloſe, and in great breadth, will likewiſe bear up a great weight, being even laid, without tilting upon the ſides. The farther extenſion of this experiment for flying may be thought upon.

*Experiment ſolitary touching the dye of ſcarlet.*

887. THERE are in ſome places (namely in *Cephalenia*,) a little ſhrub which they call holly-oak, or dwarf-oak: upon the leaves whereof there riſeth a tumor like a bliſter; which they gather, and rub out of it a certain red duſt, that converteth (after a while) into worms, which they kill with wine, (as is reported,) when they begin to quicken: with this duſt they dye ſcarlet.

*Experiment ſolitary touching maleficiating.*

888. IN *Zant* it is very ordinary to make men impotent, to accompany with their wives. The like is practiſed in *Gaſcony*; where it is called *Nover l'eguillette*. It is practiſed always upon the wedding-day. And in *Zant* the mothers themſelves do it, by way of prevention; becauſe thereby they hinder other charms, and can undo their own. It is a thing the civil law taketh knowledge of; and therefore is of no light regard.

*Experiment ſolitary touching the riſe of water by means of flame.*

889. IT is a common experiment, but the cauſe is miſtaken. Take a pot, (or better a glaſs, becauſe therein you may ſee the motion,) and ſet a candle lighted in the bottom of a baſon of water, and turn the mouth of the pot or glaſs over the candle, and it will make the water riſe. They aſcribe it to the drawing of heat, which is not true: for it appeareth plainly to be but a motion of *nexe*, which they call *ne detur vacuum*; and it proceedeth thus. The flame of the candle, as ſoon as it is covered, being ſuffocated by the cloſe air, leſſeneth by little and little; during which time there is ſome little aſcent of water, but not much: for the flame occupying leſs and leſs room, as it leſſeneth, the water ſucceedeth. But upon the inſtant of the candle's going out, there is a ſudden riſe of a great deal of water; for that the body of the flame filleth no more place, and ſo the air and the water ſucceed. It worketh the ſame effect, if inſtead of water you put flower or ſand into the baſon: which ſheweth, that it is not the flame's drawing the liquor as nouriſhment, as it is ſuppoſed; for all bodies are alike unto it, as it is ever in motion of *nexe*; inſomuch as I have ſeen the glaſs, being held by the hand, hath lifted up the baſon and all; the motion of *nexe* did ſo claſp the bottom of the baſon. That experiment, when the baſon was lifted up, was made with oil, and not with water: nevertheleſs this is true, that at the very firſt ſetting of the mouth of the glaſs upon the bottom of the baſon, it draweth up the water a little, and then ſtandeth at a ſtay, almoſt till the candle's going out, as was ſaid. This may ſhew ſome attraction at firſt: but of this we will ſpeak more, when we handle attractions by heat.

*Experiments in conſert touching the influences of the moon.*

OF the power of the celeſtial bodies, and what more ſecret influences they have, beſides the two manifeſt influences of heat and light, we ſhall ſpeak when we handle experiments touching the celeſtial bodies: mean while we will give ſome directions for more certain trials, of the virtue and influences of the moon, which is our neareſt neighbour.

THE influences of the moon (moſt obſerved) are four; the drawing forth of heat; the inducing of putrefaction; the encreaſe of moiſture; the exciting of the motions of ſpirits.

890. FOR the drawing forth of heat, we have formerly preſcribed to take water warm, and to ſet part of it againſt the moon-beams, and part of it with a ſcreen between; and to ſee whether that which ſtandeth expoſed to the beams will not cool ſooner. But becauſe this is but a ſmall interpoſition, (tho' in the ſun we ſee a ſmall ſhade doth much,) it were good to try it when the moon ſhineth, and when the moon ſhineth not at all; and with water warm in a glaſs-bottle, as well as in a diſh; and with cinders, and with iron red hot, *&c.*

891. FOR the inducing of putrefaction, it were good to try it with fleſh,

or

or fiſh, expoſed to the moon-beams; and again expoſed to the air, when the moon ſhineth not for the like time; to ſee whether will corrupt ſooner: and try it alſo with capon, or ſome other fowl, laid abroad, to ſee whether it will mortify and become tender ſooner; try it alſo with dead flies, or dead worms, having a little water caſt upon them, to ſee whether will putrefy ſooner. Try it alſo with an apple, or orange, having holes made in their tops, to ſee whether will rot or mould ſooner? Try it alſo with *Holland* cheeſe, having wine put into it, whether will breed mites ſooner or greater?

892. FOR the increaſe of moiſture, the opinion received is; that ſeeds will grow ſooneſt; and hair, and nails, and hedges, and herbs, cut, *&c.* will grow ſooneſt, if they be ſet or cut in the increaſe of the moon. Alſo that brains in rabbits, woodcocks, calves, *&c.* are fulleſt in the full of the moon: and ſo of marrow in the bones; and ſo of oiſters and cockles, which of all the reſt are the eaſieſt tried if you have them in pits.

893. TAKE ſome ſeeds, or roots, (as onions, *&c.*) and ſet ſome of them immediately after the change; and others of the ſame kind immediately after the full: let them be as like as can be; the earth alſo the ſame as near as may be; and therefore beſt in pots. Let the pots alſo ſtand where no rain or ſun may come to them, leſt the difference of the weather confound the experiment: and then ſee in what time the ſeeds ſet in the increaſe of the moon, come to a certain height; and how they differ from thoſe that are ſet in the decreaſe of the moon.

894. IT is like, that the brain of man waxeth moiſter and fuller upon the full of the moon: and therefore it were good for thoſe that have moiſt brains, and are great drinkers, to take fume of *lignum aloes*, roſemary, frankincenſe, *&c.* about the full of the moon. It is like alſo, that the humours in men's bodies increaſe and decreaſe as the moon doth; and therefore it were good to purge ſome day or two after the full; for that then the humours will not repleniſh ſo ſoon again.

895. As for the exciting of the motion of the ſpirits, you muſt note that the growth of hedges, herbs, hair, *&c.* is cauſed from the moon, by exciting of the ſpirits, as well as by increaſe of the moiſture. But for ſpirits in particular, the great inſtance is in lunacies.

896. THERE may be other ſecret effects of the influence of the moon, which are not yet brought into obſervation. It may be, that if it ſo fall out, that the wind be north, or north-eaſt, in the full of the moon, it increaſeth cold; and if ſouth, or ſouth-weſt, it diſpoſeth the air for a good while to warmth and rain; which would be obſerved.

897. IT may be, that children, and young cattle, that are brought forth in the full of the moon, are ſtronger and larger than thoſe that are brought forth in the wane; and thoſe alſo which are begotten in the full of the moon: ſo that it might be good huſbandry to put rams and bulls to their females, ſomewhat before the full of the moon. It may be alſo, that the eggs lay'd in the full of the moon breed the better bird: and a number of the like effects which may be brought into obſervation. *Quaere* alſo, whether great thunders and earthquakes be not moſt in the full of the moon.

### *Experiment ſolitary touching vinegar.*

898. THE turning of wine to vinegar, is a kind of putrefaction: and in making of vinegar, they uſe to ſet veſſels of wine over-againſt the noon-ſun; which calleth out the more oily ſpirits, and leaveth the liquor more ſour and hard. We ſee alſo, that burnt wine is more hard and aſtringent, than wine

unburnt. It is ſaid, that cyder in navigations under the line ripeneth, when wine or beer ſoureth. It were good to ſet a rundlet of verjuice over-againſt the ſun in ſummer, as they do vinegar, to ſee whether it will ripen and ſweeten.

*Experiment ſolitary touching creatures that ſleep all winter.*

899. THERE be divers creatures that ſleep all winter, as the bear, the hedge-hog, the bat, the bee, *&c.* Theſe all wax fat when they ſleep, and egeſt not. The cauſe of their fattening during their ſleeping time, may be the want of aſſimilating; for whatſoever aſſimilateth not to fleſh, turneth either to ſweat or fat. Theſe creatures, for part of their ſleeping time, have been obſerved not to ſtir at all; and for the other part, to ſtir, but not to remove. And they get warm and cloſe places to ſleep in. When the *Flemings* wintered in *Nova Zembla*, the bears about the middle of *November* went to ſleep; and then the foxes began to come forth, which durſt not before. It is noted by ſome of the ancients, that the ſhe-bear breedeth, and lieth in with her young, during that time of reſt: and that a bear big with young hath ſeldom been ſeen.

*Experiment ſolitary touching the generation of creatures by copulating, and by putrefaction.*

900. SOME living creatures are procreated by copulation between male and female: ſome by putrefaction; and of thoſe which come by putrefaction, many do (nevertheleſs) afterwards procreate by copulation. For the cauſe of both generations: firſt, it is moſt certain, that the cauſe of all vivification, is a gentle and proportionable heat, working upon a glutinous and yielding ſubſtance: for the heat doth bring forth ſpirit in that ſubſtance; and the ſubſtance being glutinous produceth two effects; the one, that the ſpirit is detained, and cannot break forth: the other, that the matter being gentle and yielding, is driven forwards by the motion of the ſpirits, after ſome ſwelling into ſhape and members. Therefore all ſperm, all menſtruous ſubſtance, all matter whereof creatures are produced by putrefaction, have evermore a cloſeneſs, lentor, and ſequacity. It ſeemeth therefore, that the generation by ſperm only, and by putrefaction, have two different cauſes. The firſt is, for that creatures which have a definite and exact ſhape, (as thoſe have which are procreated by copulation) cannot be produced by a weak and caſual heat; nor out of matter, which is not exactly prepared according to the ſpecies. The ſecond is, for that there is a greater time required for maturation of perfect creatures; for if the time required in vivification be of any length, then the ſpirit will exhale before the creature be mature: except it be incloſed in a place where it may have continuance of the heat, acceſs of ſome nouriſhment to maintain it, and cloſeneſs that may keep it from exhaling: And ſuch places are the wombs and matrices of the females. And therefore all creatures made of putrefaction, are of more uncertain ſhape; and are made in ſhorter time; and need not ſo perfect an encloſure, though ſome cloſeneſs be commonly required. As for the heathen opinion, which was, that upon great mutations of the world, perfect creatures were firſt engendred of concretion; as well as frogs, and worms, and flies, and ſuch like, are now; we know it to be vain: but if any ſuch thing ſhould be admitted, diſcourſing according to ſenſe, it cannot be, except you admit of a *chaos* firſt, and commixture of heaven and earth. For the frame of the world once in order, cannot effect it by any exceſs or caſualty.

NATU-

# NATURAL HISTORY.

## CENT. X.

*Experiments in conſort touching the tranſmiſſion and influx of immateriate virtues, and the force of imagination.*

THE philoſophy of *Pythagoras*, (which was full of ſuperſtition) did firſt plant a monſtrous imagination, which afterwards was, by the ſchool of *Plato*, and others, watered and nouriſhed. It was, that the world was one, entire, perfect, living creature; inſomuch as *Apollonius* of *Tyana*, a *Pythagorean* prophet, affirmed, that the ebbing and flowing of the ſea, was the reſpiration of the world, drawing in water as breath, and putting it forth again. They went on, and inferred; that if the world were a living creature, it had a ſoul and ſpirit; which alſo they held, calling it *ſpiritus mundi*; the ſpirit or ſoul of the world: by which they did not intend God; (for they did admit of a Deity beſides:) but only the ſoul or eſſential form of the univerſe. This foundation being laid, they might build upon it what they would; for in a living creature, though never ſo great, (as for example, in a great whale) the ſenſe and the affects of any one part of the body, inſtantly make a tranſcurſion throughout the whole body: ſo that by this they did inſinuate, that no diſtance of place, nor want or indiſpoſition of matter, could hinder magical operations; but that (for example) we might here in *Europe*, have ſenſe and feeling of that which was done in *China*: and likewiſe we might work any effect without and againſt matter; and this not holpen by the co-operation of angels or ſpirits, but only by the unity and harmony of nature. There were ſome alſo that ſtayed not here; but went farther, and held; that if the ſpirit of man, (whom they call the microcoſm) do give a fit touch to the ſpirit of the world, by ſtrong imaginations and beliefs, it might command nature; for *Paracelſus*, and ſome darkſome authors of magick, do aſcribe to imagination exalted, the power of miracle-working faith. With theſe vaſt and bottomleſs follies men have been (in part) entertained.

BUT we, that hold firm to the works of God, and to the ſenſe, which is God's lamp; (*lucerna Dei ſpiraculum hominis*;) will enquire with all ſobriety and ſeverity, whether there be to be found in the foot ſteps of nature, any ſuch tranſmiſſion and influx of immateriate virtues; and what the force of imagination is; either upon the body imaginant, or upon another body: wherein it will be like that labour of *Hercules*, in purging the ſtable of *Augeas*, to ſeparate from ſuperſtitious and magical arts and obſervations, any thing that

is

is clean and pure natural; and not to be either contemned or condemned. And although we ſhall have occaſion to ſpeak of this in more places than one, yet we will now make ſome entrance thereinto.

*Experiments in conſort, monitory, touching tranſmiſſion of ſpirits, and the force of imagination.*

901. MEN are to be admoniſhed, that they do not withdraw credit from the operations by tranſmiſſion of ſpirits, and force of imagination, becauſe the effects fail ſometimes. For as in infection, and contagion from body to body, (as the plague, and the like) it is moſt certain, that the infection is received (many times) by the body paſſive, but yet is by the ſtrength and good diſpoſition thereof, repulſed and wrought out, before it be formed in a diſeaſe; ſo much more in impreſſions from mind to mind, or from ſpirit to ſpirit, the impreſſion taketh, but is encountred and overcome by the mind and ſpirit, which is paſſive, before it work any manifeſt effect. And therefore they work moſt upon weak minds and ſpirits: as thoſe of women; ſick perſons; ſuperſtitious and fearful perſons; children and young creatures:

*Neſcio quis teneros oculus mihi faſcinat agnos:*

The poet ſpeaketh not of ſheep, but of lambs. As for the weakneſs of the power of them upon kings and magiſtrates; it may be aſcribed (beſides the main, which is the protection of God over thoſe that execute his place) to the weakneſs of the imagination of the imaginant: for it is hard for a witch or a ſorcerer to put on a belief that they can hurt ſuch perſons.

902. MEN are to be admoniſhed on the other ſide, that they do not eaſily give place and credit to theſe operations, becauſe they ſucceed many times; for the cauſe of this ſucceſs is (oft) to be truly aſcribed unto the force of affection and imagination upon the body agent; and then by a ſecondary means it may work upon a diverſe body: as for example; if a man carry a planet's ſeal, or a ring, or ſome part of a beaſt, believing ſtrongly that it will help him to obtain his love; or to keep him from danger of hurt in fight; or to prevail in a ſuit, *&c.* it may make him more active and induſtrious; and again, more confident and perſiſting, than otherwiſe he would be. Now the great effects that may come of induſtry and perſeverance, (eſpecially in civil buſineſs) who knoweth not? For we ſee audacity doth almoſt bind and mate the weaker ſort of minds; and the ſtate of human actions is ſo variable, that to try things oft, and never to give over, doth wonders: therefore it were a mere fallacy and miſtaking to aſcribe that to the force of imagination upon another body, which is but the force of imagination upon the proper body; for there is no doubt, but that imagination and vehement affection work greatly upon the body of the imaginant; as we ſhall ſhew in due place.

903. MEN are to be admoniſhed, that as they are not to miſtake the cauſes of theſe operations; ſo much leſs they are to miſtake the fact, or effect; and raſhly to take that for done which is not done. And therefore as divers wiſe judges have preſcribed and cautioned, men may not too raſhly believe the confeſſions of witches, nor yet the evidence againſt them. For the witches themſelves are imaginative, and believe oft-times they do that which they do not: and people are credulous in that point, and ready to impute accidents and natural operations to witch-craft. It is worthy the obſerving, that both in ancient and late times, (as in the *Theſſalian* witches, and the meetings of witches that have been recorded by ſo many late confeſſions) the great

great wonders which they tell, of carrying in the air, transforming themſelves into other bodies, *&c.* are ſtill reported to be wrought, not by incantations or ceremonies, but by ointments, and anointing themſelves all over: this may juſtly move a man to think, that theſe fables are the effects of imagination: for it is certain, that ointments do all, (if they be laid on any thing thick,) by ſtopping of the pores, ſhut in the vapours, and ſend them to the head extremely. And for the particular ingredients of thoſe magical ointments, it is like they are opiate and ſoporiferous. For anointing of the forehead, neck, feet, back-bone, we know is uſed for procuring dead ſleeps: and if any man ſay that this effect would be better done by inward potions; anſwer may be made, that the medicines, which go to the ointments, are ſo ſtrong, that if they were uſed inwards, they would kill thoſe that uſe them: and therefore they work potently, though outwards.

WE will divide the ſeveral kinds of the operations by tranſmiſſion of ſpirits and imagination, which will give no ſmall light to the experiments that follow. All operations by tranſmiſſion of ſpirits and imagination have this; that they work at diſtance, and not at touch; and they are theſe being diſtinguiſhed.

904. THE firſt is the tranſmiſſion or emiſſion of the thinner (and more airy) parts of bodies; as in odours and infections; and this is, of all the reſt, the moſt corporeal. But you muſt remember withal, that there be a number of thoſe emiſſions, both wholeſome and unwholeſome, that give no ſmell at all: for the plague, many times when it is taken, giveth no ſcent at all: and there be many good and healthful airs that do appear by habitation and other proofs that differ not in ſmell from other airs. And under this head you may place all imbibitions of air, where the ſubſtance is material, odour-like; whereof ſome nevertheleſs are ſtrange, and very ſuddenly diffuſed; as the alteration which the air receiveth in *AEgypt*, almoſt immediately, upon the riſing of the river of *Nilus*, whereof we have ſpoken.

905. THE ſecond is the tranſmiſſion or emiſſion of thoſe things that we call ſpiritual ſpecies; as viſibles and ſounds: the one whereof we have handled, and the other we ſhall handle in due place. Theſe move ſwiftly, and at great diſtance; but then they require a medium well diſpoſed, and their tranſmiſſion is eaſily ſtopped.

906. THE third is the emiſſions, which cauſe attraction of certain bodies at diſtance; wherein though the loadſtone be commonly placed in the firſt rank, yet we think good to except it, and refer it to another head: but the drawing of amber and jet, and other electrick bodies, and the attraction in gold of the ſpirit of quickſilver at diſtance; and the attraction of heat at diſtance; and that of fire to *Naphtha*; and that of ſome herbs to water, tho' at diſtance; and divers others; we ſhall handle, but yet not under this preſent title, but under the title of attraction in general.

907. THE fourth is the emiſſion of ſpirits, and immateriate powers and virtues, in thoſe things which work by the univerſal configuration and ſympathy of the world; not by forms, or celeſtial influxes, (as is vainly taught and received,) but by the primitive nature of matter, and the ſeeds of things. Of this kind is (as we yet ſuppoſe) the working of the loadſtone, which is by conſent with the globe of the earth: of this kind is the motion of gravity, which is by conſent of denſe bodies with the globe of the earth: of this kind is ſome diſpoſition of bodies to rotation, and particularly from eaſt to weſt: of which kind we conceive the main float and refloat of the ſea is, which is by conſent of the univerſe, as part of the diurnal motion. Theſe

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immateriate virtues have this property differing from others; that the diverſity of the medium hindereth them not; but they paſs through all mediums, yet at determinate diſtances. And of theſe we ſhall ſpeak, as they are incident to ſeveral titles.

908. The fifth is the emiſſion of ſpirits; and this is the principal in our intention to handle now in this place; namely, the operation of the ſpirits of the mind of man upon other ſpirits: and this is of a double nature; the operations of the affections, if they be vehement; and the operation of the imagination, if it be ſtrong. But theſe two are ſo coupled, as we ſhall handle them together; for when an envious, or amorous aſpect, doth infect the ſpirits of another, there is joined both affection and imagination.

909. The ſixth is, the influxes of the heavenly bodies, beſides thoſe two manifeſt ones, of heat and light. But theſe we will handle, where we handle the celeſtial bodies and motions.

910. The ſeventh is the operations of ſympathy, which the writers of natural magick have brought into an art or precept: and it is this; that if you deſire to ſuperinduce any virtue or diſpoſition upon a perſon, you ſhould take the living creature, in which that virtue is moſt eminent, and in perfection; of that creature you muſt take the parts wherein that virtue chiefly is collocate: again, you muſt take thoſe parts in the time and act when that virtue is moſt in exerciſe; and then you muſt apply it to that part of man wherein that virtue chiefly conſiſteth. As if you would ſuperinduce courage and fortitude, take a lion or a cock; and take the heart, tooth, or paw of the lion; or the heart or ſpur of the cock: take thoſe parts immediately after the lion or the cock have been in fight; and let them be worn upon a man's heart or wriſt. Of theſe and ſuch like ſympathies, we ſhall ſpeak under this preſent title.

911. The eighth and laſt is, an emiſſion of immateriate virtues; ſuch as we are a little doubtful to propound; it is ſo prodigious: But that it is ſo conſtantly avouched by many: and we have ſet it down as a law to our ſelves, to examine things to the bottom; and not to receive upon credit, or reject upon improbabilities, until there hath paſſed a due examination. This is the ſympathy of individuals: for as there is a ſympathy of ſpecies, ſo (it may be) there is a ſympathy of individuals: that is, that in things, or the parts of things that have been once contiguons or entire, there ſhould remain a tranſmiſſion of virtue from the one to the other: as between the weapon and the wound. Whereupon is blazed abroad the operation of *unguentum teli:* and ſo of a piece of lard, or ſtick of elder, *&c.* that if part of it be conſumed or putrefied, it will work upon the other part ſever'd. Now we will purſue the inſtances themſelves.

*Experiments in conſort touching emiſſion of ſpirits in vapour or exhalation, odour-like.*

912. The plague is many times taken without manifeſt ſenſe, as hath been ſaid. And they report, that where it is found, it hath a ſcent of the ſmell of a mellow apple; and (as ſome ſay) of *May*-flowers: and it is alſo received, that ſmells of flowers that are mellow and luſcious, are ill for the plague; as white lilies, cowſlips and hyacinths.

913. The plague is not eaſily received by ſuch as continually are about them that have the plague; as keepers of the ſick, and phyſicians; nor again by ſuch as take antidotes, either inward, (as mithridate, juniper-berries, rue, leaf and ſeed, *&c.*) or outward, (as angelica, zedoary, and the like, in the mouth;

mouth; tar, *galbanum*, and the like, in perfume;) nor again by old people, and ſuch as are of a dry and cold complexion. On the other ſide, the plague taketh ſooneſt hold of thoſe that come out of a freſh air, and of thoſe that are faſting, and of children; and it is likewiſe noted to go in a blood, more than to a ſtranger.

914. THE moſt pernicious infection, next the plague, is the ſmell of the jail, when priſoners have been long, and cloſe, and naſtily kept; whereof we have had, in our time, experience, twice or thrice; when both the judges that ſate upon the jail, and numbers of thoſe that attended the buſineſs, or were preſent, ſicken'd upon it, and died. Therefore it were good wiſdom, that in ſuch caſes the jail were aired before they be brought forth.

915. OUT of queſtion, if ſuch foul ſmells be made by art, and by the hand, they conſiſt chiefly of man's fleſh, or ſweat putrefied; for they are not thoſe ſtinks which the noſtrils ſtraight abhor and expel, that are moſt pernicious; but ſuch airs as have ſome ſimilitude with man's body; and ſo inſinuate themſelves, and betray the ſpirits. There may be great danger in uſing ſuch compoſitions, in great meetings of people within houſes; as in churches, at arraignments, at plays and ſolemnities, and the like: for poiſoning of air is no leſs dangerous than poiſoning of water, which hath been uſed by the *Turks* in the wars, and was uſed by *Emmanuel Comnenus* towards the Chriſtians, when they paſſed through his country to the *Holy Land*. And theſe empoiſonments of air are the more dangerous in meetings of people, becauſe the much breath of people doth further the reception of the infection; and therefore, where any ſuch thing is feared, it were good thoſe publick places were perfumed, before the aſſemblies.

916. THE empoiſonment of particular perſons, by odours, hath been reported to be in perfumed gloves, or the like: and it is like, they mingle the poiſon that is deadly, with ſome ſmells that are ſweet, which alſo maketh it the ſooner received. Plagues alſo have been raiſed by anointing of the chinks of doors, and the like; not ſo much by the touch, as for that it is common for men, when they find any thing wet upon their fingers, to put them to their noſe; which men therefore ſhould take heed how they do. The beſt is, that theſe compoſitions of infectious airs cannot be made without danger of death, to them that make them. But then again, they may have ſome antidotes to ſave themſelves; ſo that men ought not to be ſecure of it.

917. THERE have been in divers countries great plagues, by the putrefaction of great ſwarms of graſhoppers and locuſts, when they have been dead and caſt upon heaps.

918. IT happeneth often in mines, that there are damps which kill, either by ſuffocation, or by the poiſonous nature of the mineral: and thoſe that deal much in refining, or other works about metals and minerals, have their brains hurt and ſtupified by the metalline vapours. Amongſt which it is noted, that the ſpirits of quickſilver ever fly to the ſkull, teeth, or bones; inſomuch as gilders uſe to have a piece of gold in their mouth, to draw the ſpirits of the quickſilver; which gold afterwards they find to be whiten'd. There are alſo certain lakes and pits, ſuch as that of *Avernus*, that poiſon birds (as is ſaid) which fly over them; or men, that ſtay too long about them.

919. THE vapour of char-coal, or ſea-coal, in a cloſe room, hath killed many; and it is the more dangerous, becauſe it cometh without any ill ſmell, but ſtealeth on by little and little, inducing only a faintneſs, without

any manifeſt ſtrangling. When the *Dutchmen* winter'd at *Nova Zembla*, and that they could gather no more ſticks, they fell to make fire of ſome ſea-coal they had, wherewith (at firſt) they were much refreſhed; but a little after they had ſate about the fire, there grew a general ſilence and lothneſs to ſpeak amongſt them; and immediately after, one of the weakeſt of the company fell down in a ſwoon; whereupon they doubting what it was, opened the door to let in air, and ſo ſaved themſelves. The effect (no doubt) is wrought by the inſpiſſation of the air; and ſo of the breath and ſpirits. The like enſueth in rooms newly plaiſter'd, if a fire be made in them; whereof no leſs man than the emperor *Jovinianus* died.

920. VIDE the experiment 803. touching the infectious nature of the air, upon the firſt ſhowers, after long drought.

921. IT hath come to paſs, that ſome apothecaries, upon ſtamping of *coloquintida*, have been put into a great ſcouring by the vapour only.

922. IT hath been a practice to burn a pepper they call guinea-pepper, which hath ſuch a ſtrong ſpirit, that it provoketh a continual ſneezing in thoſe that are in the room.

923. IT is an ancient tradition, that blear-eyes infect ſound eyes; and that a menſtruous woman, looking upon a glaſs, doth ruſt it: nay, they have an opinion which ſeemeth fabulous; that menſtruous women going over a field, or garden, do corn and herbs good, by killing the worms.

924. THE tradition is no leſs ancient, that the baſiliſk killeth by aſpect; and that the wolf, if he ſee a man firſt, by aſpect ſtriketh a man hoarſe.

925. PERFUMES convenient do dry and ſtrengthen the brain, and ſtay rheums and defluxions, as we find in fume of roſemary dried, and *lignum aloes*; and *calamus* taken at the mouth and noſtrils: and no doubt there be other perfumes that do moiſten and refreſh, and are fit to be uſed in burning agues, conſumptions, and too much wakefulneſs; ſuch as are roſe-water, vinegar, lemon-peels, violets, the leaves of vines ſprinkled with a little roſe-water, *&c.*

926. THEY do uſe in ſudden faintings and ſwoonings, to put a handkerchief with roſe-water, or a little vinegar, to the noſe; which gathereth together again the ſpirits, which are upon point to reſolve and fall away.

927. TOBACCO comforteth the ſpirits, and diſchargeth wearineſs, which it worketh partly by opening, but chiefly by the opiate virtue, which condenſeth the ſpirits. It were good therefore to try the taking of fumes by pipes (as they do in tobacco,) of other things; as well to dry and comfort, as for other intentions. I wiſh trial be made of the drying fume of roſemary and *lignum aloes*, before-mentioned, in pipe; and ſo of nutmeg, and *folium Indum*, *&c.*

928. THE following of the plough hath been approved for refreſhing the ſpirits, and procuring appetite; but to do it in the ploughing for wheat or rye, is not ſo good, becauſe the earth has ſpent her ſweet breath in vegetables put forth in ſummer. It is better therefore to do it when you ſow barley. But becauſe ploughing is tied to ſeaſons, it is beſt to take the air of the earth new turned up, by digging with the ſpade, or ſtanding by him that diggeth. Gentlewomen may do themſelves much good by kneeling upon a cuſhion, and weeding. And theſe things you may practiſe in the beſt ſeaſons; which is ever the early ſpring, before the earth putteth forth the vegetables, and in the ſweeteſt earth you can chuſe. It would be done alſo when the dew is a little off the ground, leſt the vapour be too moiſt. I knew a great man that lived long, who had a clean clod of earth brought to him every

morning

morning as he ſate in his bed; and he would hold his head over it a good pretty while. I commend alſo, ſometimes, in digging of new earth, to pour in ſome *Malmſey* or *Greek* wine, that the vapour of the earth and wine together, may comfort the ſpirits the more; provided always it be not taken for a heathen ſacrifice, or libation to the earth.

929. THEY have in phyſick uſe of pomanders, and knots of powders, for drying of rheums, comforting of the heart, provoking of ſleep, *&c.* For though thoſe things be not ſo ſtrong as perfumes, yet you may have them continually in your hand; whereas perfumes you can take but at times: and beſides, there be divers things that breathe better of themſelves, than when they come to the fire; as *nigella Romana*, the ſeed of *melanthium*, *amomum*, *&c.*

930. THERE be two things, which (inwardly uſed) do cool and condenſe the ſpirits; and I wiſh the ſame to be tried outwardly in vapours. The one is nitre, which I would have diſſolved in *Malmſey*, or *Greek* wine, and ſo the ſmell of the wine taken; or if you would have it more forcible, pour of it upon a fire-pan, well heated, as they do roſe-water and vinegar. The other is the diſtilled water of wild poppy, which I wiſh to be mingled, at half, with roſe-water, and ſo taken with ſome mixture of a few cloves in a perfuming-pan. The like would be done with the diſtilled water of ſaffron flowers.

931. SMELLS of muſk, and amber, and civet, are thought to further venereous appetite; which they may do by the refreſhing and calling forth of the ſpirits.

932. INCENSE and nidorous ſmells (ſuch as were of ſacrifices) were thought to intoxicate the brain, and to diſpoſe men to devotion: which they may do by a kind of ſadneſs, and contriſtation of the ſpirits; and partly alſo by heating and exalting them. We ſee, that amongſt the *Jews*, the principal perfume of the ſanctuary was forbidden all common uſes.

933. THERE be ſome perfumes preſcribed by the writers of natural magick, which procure pleaſant dreams: and ſome others (as they ſay) that procure prophetical dreams; as the ſeeds of flax, flea-wort, *&c.*

934. IT is certain, that odours do, in a ſmall degree, nouriſh; eſpecially the odour of wine: and we ſee men an hungred do love to ſmell hot bread. It is related, that *Democritus*, when he lay a dying, heard a woman in the houſe complain, that ſhe ſhould be kept from being at a feaſt and ſolemnity, (which ſhe much deſired to ſee,) becauſe there would be a corpſe in the houſe; whereupon he cauſed loaves of new bread to be ſent for, and opened them, and poured a little wine into them; and ſo kept himſelf alive with the odour of them, till the feaſt was paſt. I knew a gentleman that would faſt (ſometimes) three or four, yea five days, without meat, bread, or drink; but the ſame man uſed to have continually, a great wiſp of herbs that he ſmelled on: and amongſt thoſe herbs, ſome eſculent herbs of ſtrong ſcent; as onions, garlick, leeks, and the like.

935. THEY do uſe, for the accident of the mother, to burn feathers, and other things of ill odour: and by thoſe ill ſmells, the riſing of the mother is put down.

936. THERE be airs which the phyſicians adviſe their patients to remove unto, in conſumptions, or upon recovery of long ſickneſſes: which (commonly) are plain champains, but graſing, and not over-grown with heath, or the like; or elſe timber-ſhades, as in foreſts, and the like. It is noted alſo, that groves of bays do forbid peſtilent airs; which was accounted a

great cauſe of the wholeſome air of *Antiochia*. There be alſo ſome ſoils that put forth odorate herbs of themſelves; as wild thyme, wild marjoram, penny-royal, camomile; and in which the briar roſes ſmell almoſt like muſk roſes; which (no doubt) are ſigns that do diſcover an excellent air.

937. It were good for men to think of having healthful air in their houſes; which will never be if the rooms be low roofed, or full of windows and doors; for the one maketh the air cloſe, and not freſh; and the other maketh it exceeding unequal; which is a great enemy to health. The windows alſo ſhould not be high up to the roof, (which is in uſe for beauty and magnificence) but low. Alſo ſtone-walls are not wholeſome; but timber is more wholeſome; and eſpecially brick: nay, it hath been uſed by ſome with great ſucceſs to make their walls thick; and to put a lay of chalk between the bricks, to take away all dampiſhneſs.

*Experiment ſolitary touching the emiſſions of ſpiritual ſpecies which affect the ſenſes.*

938. These emiſſions (as we ſaid before) are handled, and ought to be handled by themſelves under their proper titles: that is, viſibles and audibles, each apart: in this place it ſhall ſuffice to give ſome general obſervations common to both. Firſt, they ſeem to be incorporeal. Secondly, they work ſwiftly. Thirdly, they work at large diſtances. Fourthly, in curious varieties. Fifthly, they are not effective of any thing; nor leave no work behind them; but are energies merely: for their working upon mirrours, and places of echo, doth not alter any thing in thoſe bodies; but it is the ſame action with the original, only repercuſſed. And as for the ſhaking of windows, or rarifying the air by great noiſes; and the heat cauſed by burning-glaſſes; they are rather concomitants of the audible and viſible ſpecies, than the effects of them. Sixthly, they ſeem to be of ſo tender and weak a nature, as they affect only ſuch a rare and attenuate ſubſtance, as is the ſpirit of living creatures.

*Experiments in conſort touching the emiſſion or immateriate virtues from the minds and ſpirits of men, either by affections, or by imaginations, or by other impreſſions.*

939. It is mentioned in ſome ſtories, that where children have been expoſed, or taken away young from their parents; and that afterward they have approached to their parents preſence, the parents (though they have not known them) have had a ſecret joy or other alteration thereupon.

940. There was an *AEgyptian* ſoothſayer, that made *Antonius* believe, that his genius (which otherwiſe was brave and confident) was in the preſence of *Octavianus Caeſar*, poor and cowardly: and therefore he adviſed him, to abſent himſelf, (as much as he could) and remove far from him. The ſoothſayer was thought to be ſuborned by *Cleopatra*, to make him live in *AEgypt*, and other remote places from *Rome*. Howſoever the conceit of a predominant or maſtering ſpirit of one man over another, is ancient, and received ſtill, even in vulgar opinion.

941. There are conceits, that ſome men that are of an ill and melancholy nature, do incline the company into which they come, to be ſad and ill-diſpoſed; and contrariwiſe, that others that are of a jovial nature, do diſpoſe the company to be merry and chearful. And again, that ſome men are lucky to be kept company with, and employed; and others unlucky. Certainly, it is agreeable to reaſon, that there are at the leaſt ſome light effluxions from

from ſpirit to ſpirit, when men are in preſence one with another, as well as from body to body.

942. IT hath been obſerved, that old men who have loved young company, and been converſant continually with them, have been of long life; their ſpirits (as it ſeemeth) being recreated by ſuch company. Such were the ancient ſophiſts and rhetoricians; which ever had young auditors and diſciples; as *Gorgias*, *Protagoras*, *Iſocrates*, *&c.* who lived till they were an hundred years old. And ſo likewiſe did many of the grammarians and ſchool-maſters; ſuch as was *Orbilius*, *&c.*

943. AUDACITY and confidence doth, in civil buſineſs, ſo great effects, as a man may (reaſonably) doubt, that beſides the very daring, and earneſtneſs, and perſiſting, and importunity, there ſhould be ſome ſecret binding, and ſtooping of other mens ſpirits to ſuch perſons.

944. THE affections (no doubt) do make the ſpirits more powerful and active; and eſpecially thoſe affections which draw the ſpirits into the eyes: which are two; love and envy, which is called *oculus malus*. As for love, the Platoniſts (ſome of them) go ſo far, as to hold that the ſpirit of the lover doth paſs into the ſpirits of the perſon loved; which cauſeth the deſire of return into the body, whence it was emitted: whereupon followeth that appetite of contact and conjunction which is in lovers. And this is obſerved likewiſe, that the aſpects which procure love, are not gazings, but ſudden glances and dartings of the eye. As for envy, that emitteth ſome malign and poiſonous ſpirits, which taketh hold of the ſpirit of another; and is likewiſe of greateſt force, when the caſt of the eye is oblique. It hath been noted alſo, that it is moſt dangerous when an envious eye is caſt upon perſons in glory, and triumph, and joy. The reaſon whereof is, for that at ſuch times the ſpirits come forth moſt into the outward parts, and ſo meet the percuſſion of the envious eye more at hand: and therefore it hath been noted, that after great triumphs, men have been ill-diſpoſed for ſome days following. We ſee the opinion of faſcination is ancient, for both effects; of procuring love; and ſickneſs cauſed by envy: and faſcination is ever by the eye. But yet if there be any ſuch infection from ſpirit to ſpirit, there is no doubt but that it worketh by preſence, and not by the eye alone; yet moſt forcibly by the eye.

945. FEAR and ſhame are likewiſe infective; for we ſee that the ſtarting of one will make another ready to ſtart: and when one man is out of countenance in a company, others do likewiſe bluſh in his behalf.

Now we will ſpeak of the force of imagination upon other bodies; and of the means to exalt and ſtrengthen it. Imagination, in this place, I underſtand to be, the repreſentation of an individual thought. Imagination is of three kinds: the firſt joined with belief of that which is to come: the ſecond joined with memory of that which is paſt; and the third is of things preſent, or as if they were preſent; for I comprehend in this, imagination feigned, and at pleaſure; as if one ſhould imagine ſuch a man to be in the veſtments of a pope; or to have wings. I ſingle out for this time, that which is with faith, or belief of that which is to come. The inquiſition of this ſubject in our way, (which is by induction) is wonderful hard: for the things that are reported are full of fables; and new experiments can hardly be made, but with extreme caution; for the reaſon which we will after declare.

THE power of imagination is in three kinds; the firſt upon the body of the imaginant; including likewiſe the child in the mother's womb; the ſecond

cond is, the power of it upon dead bodies, as plants, wood, ſtone, metal, &c. The third is, the power of it upon the ſpirits of men and living creatures; and with this laſt we will only meddle.

The problem therefore is, whether a man conſtantly and ſtrongly believing, that ſuch a thing ſhall be; (as that ſuch an one will love him; or that ſuch an one will grant him his requeſt; or that ſuch an one ſhall recover a ſickneſs; or the like;) it doth help any thing to the effecting of the thing itſelf. And here again we muſt warily diſtinguiſh; for it is not meant, (as hath been partly ſaid before) that it ſhould help by making a man more ſtout, or more induſtrious; (in which kind a conſtant belief doth much; but merely by a ſecret operation, or binding, or changing the ſpirit of another: and in this it is hard (as we began to ſay) to make any new experiment; for I cannot command myſelf to believe what I will, and ſo no trial can be made. Nay it is worſe; for whatſoever a man imagineth doubtingly, or with fear, muſt needs do hurt, if imagination have any power at all; for a man repreſenteth that oftner that he feareth, than the contrary.

The help therefore is, for a man to work by another, in whom he may create belief, and not by himſelf; until himſelf have found by experience, that imagination doth prevail; for then experience worketh in himſelf belief; if the belief that ſuch a thing ſhall be, be joined with a belief that his imagination may procure it.

946. For example, I related one time to a man, that was curious and vain enough in theſe things, that I ſaw a kind of jugler, that had a pair of cards, and would tell a man what card he thought. This pretended learned man told me; it was a miſtaking in me; for (ſaid he) it was not the knowledge of the man's thought, (for that is proper to God) but it was the inforcing of a thought upon him, and binding his imagination by a ſtronger, that he could think no other card. And thereupon he aſked me a queſtion or two, which I thought he did but cunningly, knowing before what uſed to be the feats of the jugler. Sir, (ſaid he) do you remember whether he told the card, the man thought, himſelf, or bade another to tell it. I anſwered (as was true,) that he bade another tell it. Whereunto he ſaid; ſo I thought: for (ſaid he) himſelf could not have put on ſo ſtrong an imagination; but by telling the other the card, (who believed that the jugler was ſome ſtrange man, and could do ſtrange things) that other man caught a ſtrong imagination. I hearkened unto him, thinking for a vanity he ſpoke prettily. Then he aſked me another queſtion: ſaith he, do you remember, whether he bade the man think the card firſt, and afterwards told the other man in his ear what he ſhould think; or elſe that he did whiſper firſt in the man's ear that ſhould tell the card, telling that ſuch a man ſhould think ſuch a card, and after bade the man think a card? I told him, as was true; that he did firſt whiſper the man in the ear, that ſuch a man ſhould think ſuch a card: upon this the learned man did much exult and pleaſe himſelf, ſaying; lo, you may ſee that my opinion is right: for if the man had thought firſt, his thought had been fixed; but the other imagining firſt, bound his thought. Which though it did ſomewhat ſink with me, yet I made it lighter than I thought, and ſaid; I thought it was confederacy between the jugler and the two ſervants: though (indeed) I had no reaſon ſo to think, for they were both my father's ſervants; and he had never played in the houſe before. The jugler alſo did cauſe a garter to be held up; and took upon him to know, that ſuch an one ſhould point in ſuch a place of the garter; as it ſhould be near ſo many inches

inches to the longer end, and ſo many to the ſhorter; and ſtill he did it, by firſt telling the imaginer, and after bidding the actor think.

HAVING told this relation, not for the weight thereof, but becauſe it doth handſomely open the nature of the queſtion, I return to that I ſaid; that experiments of imagination muſt be practiſed by others, and not by a man's ſelf. For there be three means to fortify belief: the firſt is experience; the ſecond is reaſon; and the third is authority: and that of theſe which is far the moſt potent, is authority; for belief upon reaſon, or experience, will ſtagger.

947. FOR authority, it is of two kinds; belief in an art; and belief in a man. And for things of belief in an art, a man may exerciſe them by himſelf; but for belief in a man, it muſt be by another. Therefore if a man believe in aſtrology, and find a figure proſperous; or believe in natural magick, and that a ring with ſuch a ſtone, or ſuch a piece of a living creature, carried, will do good; it may help his imagination: but the belief in a man is far the more active. But howſoever, all authority muſt be out of a man's ſelf, turned (as was ſaid) either upon an art, or upon a man: and where authority is from one man to another, there the ſecond muſt be ignorant, and not learned, or full of thoughts; and ſuch are (for the moſt part) all witches and ſuperſtitious perſons; whoſe beliefs, tied to their teachers and traditions, are no whit controlled, either by reaſon or experience; and upon the ſame reaſon, in magick, they uſe for (the moſt part) boys and young people, whoſe ſpirits eaſilieſt take belief and imagination.

Now to fortify imagination, there be three ways: the authority whence the belief is derived, means to quicken and corroborate the imagination; and means to repeat it and refreſh it.

948. FORthe authority, we have already ſpoken: as for the ſecond, namely the means to quicken and corroborate the imagination; we ſee what hath been uſed in magick; (if there be in thoſe practices any thing that is purely natural;) as veſtments, characters, words, ſeals; ſome parts of plants, or living creatures; ſtones; choice of the hour; geſtures and motions; alſo incenſes and odours; choice of ſociety, which increaſeth imagination; diets and preparations for ſome time before. And for words, there have been ever uſed, either barbarous words, of no ſenſe, leſt they ſhould diſturb the imagination; or words of ſimilitude, that may ſecond and feed the imagination: and this was ever as well in heathen charms, as in charms of latter times. There are uſed alſo ſcripture words; for that the belief that religious texts and words have power, may ſtrengthen the imagination. And for the ſame reaſon, *Hebrew* words, (which amongſt us is counted the holy tongue, and the words more myſtical) are often uſed.

949. FOR the refreſhing of the imagination, (which was the third means of exalting it) we ſee the practices of magick, as in images of wax, and the like, that ſhould melt by little and little; or ſome other things buried in muck, that ſhould putrefy by little and little; or the like: for ſo oft as the imaginant doth think of thoſe things, ſo oft doth he repreſent to his imagination the effect of that he deſireth.

950. IF there be any power in imagination, it is leſs credible that it ſhould be ſo incorporeal and immateriate a virtue, as to work at great diſtances; or through all mediums; or upon all bodies: but that the diſtance muſt be competent; the medium not adverſe; and the body apt and proportionate. Therefore if there be any operation upon bodies, in abſence by nature, it is like to be conveyed from man to man, as fame is; as if a witch, by imagination,

gination, ſhould hurt any afar off, it cannot be naturally; but by working upon the ſpirit of ſome that cometh to the witch; and from that party upon the imagination of another; and ſo upon another; till it come to one that hath reſort to the party intended; and ſo by him to the party intended himſelf. And although they ſpeak, that it ſufficeth, to take a point, or a piece of the garment, or the name of the party, or the like; yet there is leſs credit to be given to thoſe things, except it be by working of evil ſpirits.

THE experiments, which may certainly demonſtrate the power of imagination upon other bodies, are few or none: for the experiments of witchcraft are no clear proofs; for that they may be by a tacite operation of malign ſpirits: we ſhall therefore be forced in this enquiry, to reſort to new experiments; wherein we can give only directions of trials, and not any poſitive experiments. And if any man think that we ought to have ſtayed till we had made experiment of ſome of them our ſelves, (as we do commonly in other titles) the truth is, that theſe effects of imagination upon other bodies have ſo little credit with us, as we ſhall try them at leiſure; but in the mean time we will lead others the way.

951. WHEN you work by the imagination of another, it is neceſſary that he, by whom you work, have a precedent opinion of you, that you can do ſtrange things; or that you are a man of art, as they call it; for elſe the ſimple affirmation to another, that this or that ſhall be, can work but a weak impreſſion in his imagination.

952. IT were good, becauſe you cannot diſcern fully of the ſtrength of imagination in one man more than another, that you did uſe the imagination of one more than one, that ſo you may light upon a ſtrong one. As if a phyſician ſhould tell three or four of his patient's ſervants, that their maſter ſhall ſurely recover.

953. THE imagination of one, that you ſhall uſe, (ſuch is the variety of mens minds,) cannot be always alike conſtant and ſtrong; and if the ſucceſs follow not ſpeedily, it will faint and loſe ſtrength. To remedy this, you muſt pretend to him, whoſe imagination you uſe, ſeveral degrees of means, by which to operate: as to preſcribe him that every three days, if he find not the ſucceſs apparent, he do uſe another root, or part of a beaſt, or ring, *&c.* as being of more force; and if that fail, another; and if that, another, till ſeven times. Alſo you muſt preſcribe a good large time for the effect you promiſe; as if you ſhould tell a ſervant of a ſick man, that his maſter ſhall recover, but it will be fourteen days ere he findeth it apparently, *&c.* All this to entertain the imagination that it waver leſs.

954. IT is certain, that potions, or things taken into the body; incenſes and perfumes taken at the noſtrils; and ointments of ſome parts; do (naturally) work upon the imagination of him that taketh them. And therefore it muſt needs greatly co-operate with the imagination of him whom you uſe, if you preſcribe him, before he do uſe the receipt, for the work which he deſireth, that he do take ſuch a pill, or a ſpoonful of liquor; or burn ſuch an incenſe; or anoint his temples, or the ſoles of his feet, with ſuch an ointment, or oil: and you muſt chuſe, for the compoſition of ſuch pill, perfume, or ointment, ſuch ingredients, as do make the ſpirits a little more groſs or muddy; whereby the imagination will fix the better.

955. THE body paſſive, and to be wrought upon, (I mean not of the imaginant,) is better wrought upon, (as hath been partly touched) at ſome times, than at others: as if you ſhould preſcribe a ſervant about a ſick perſon, (whom you have poſſeſſed that his maſter ſhall recover) when his maſter

ſter is faſt aſleep, to uſe ſuch a root, or ſuch a root. For imagination is like to work better upon ſleeping men, than men awake; as we ſhall ſhew when we handle dreams.

956. WE find in the art of memory, that images viſible work better than other conceits: as if you would remember the word philoſophy, you ſhall more ſurely do it, by imagining, that ſuch a man, (for men are beſt places) is reading upon *Ariſtotle*'s phyſicks; than if you ſhould imagine to ſay, I'll go ſtudy philoſophy. And therefore this obſervation would be tranſlated to the ſubject we now ſpeak of: for the more luſtrous the imagination is, it filleth and fixeth the better. And therefore I conceive, that you ſhall, in that experiment, (whereof we ſpake before,) of binding of thoughts, leſs fail, if you tell one that ſuch an one ſhall name one of twenty men, than if it were one of twenty cards. The experiment of binding of thoughts would be diverſified and tried to the full: and you are to note, whether it hit for the moſt part, though not always.

957. IT is good to conſider, upon what things imagination hath moſt force: and the rule (as I conceive) is, that it hath moſt force upon things that have the lighteſt and eaſieſt motions. And therefore above all, upon the ſpirits of men: and in them, upon ſuch affections as move lighteſt; as upon procuring of love: binding of luſt, which is ever with imagination, upon men in fear; or men in irreſolution; and the like. Whatſoever is of this kind would be throughly enquired. Trials likewiſe would be made upon plants, and that diligently: as if you ſhould tell a man, that ſuch a tree would die this year; and will him at theſe and theſe times, to go unto it, to ſee how it thriveth. As for inanimate things, it is true, that the motions of ſhuffling of cards, or caſting of dice, are very light motions: and there is a folly very uſual, that gameſters imagine, that ſome that ſtand by them, bring them ill luck. There would be trial alſo made, of holding a ring by a thread in a glaſs, and telling him that holdeth it, before, that it ſhall ſtrike ſo many times againſt the ſide of the glaſs, and no more; or of holding a key between two mens fingers, without a charm; and to tell thoſe that hold it, that at ſuch name it ſhall go off their fingers: for theſe two are extreme light motions. And howſoever I have no opinion of theſe things, yet ſo much I conceive to be true; that ſtrong imagination hath more force upon things living, or that have been living, than things merely inanimate: and more force likewiſe upon light, and ſubtile motions, than upon motions vehement, or ponderous.

958. IT is an uſual obſervation, that if the body of one murthered be brought before the murtherer, the wounds will bleed afreſh. Some do affirm, that the dead body, upon the preſence of the murtherer, hath opened the eyes; and that there have been ſuch like motions, as well where the parties murthered have been ſtrangled, or drowned, as where they have been killed by wounds. It may be, that this participateth of a miracle, by God's juſt judgment, who uſually bringeth murthers to light: but if it be natural, it muſt be referred to imagination.

959. THE tying of the point upon the day of marriage, to make men impotent towards their wives, which (as we have formerly touched) is ſo frequent in *Zant*, and *Gaſcony*, if it be natural, muſt be referred to the imagination of him that tieth the point. I conceive it to have the leſs affinity with witchcraft, becauſe not peculiar perſons only, (ſuch as witches are,) but any body may do it.

*Experiments in conſort touching the ſecret virtue of ſympathy and antipathy.*

960. THERE be many things that work upon the ſpirits of man, by ſecret ſympathy and antipathy: the virtues of precious ſtones worn, have been anciently and generally received; and curiouſly aſſigned to work ſeveral effects. So much is true; that ſtones have in them fine ſpirits; as appeareth by their ſplendour: and therefore they may work by conſent upon the ſpirits of men, to comfort and exhilarate them. Thoſe that are the beſt, for that effect, are the diamond, the emerald, the hyacinth oriental, and the gold ſtone, which is the yellow topaz. As for their particular proprieties, there is no credit to be given to them. But it is manifeſt, that light, above all things, excelleth in comforting the ſpirits of men: and it is very probable, that light varied doth the ſame effect, with more novelty. And this is one of the cauſes why precious ſtones comfort. And therefore it were good to have tincted lanthorns, or tincted ſcreens, of glaſs coloured into green, blue, carnation, crimſon, purple, *&c.* and to uſe them with candles in the night. So likewiſe to have round glaſſes, not only of glaſs colour'd through, but with colours laid between cryſtals, with handles to hold in one's hand. Priſms are alſo comfortable things. They have of *Paris*-work, looking-glaſſes, border'd with broad borders of ſmall cryſtal, and great counterfeit precious ſtones, of all colours, that are moſt glorious and pleaſant to behold; eſpecially in the night. The pictures of *Indian* feathers are likewiſe comfortable and pleaſant to behold. So alſo fair and clear pools do greatly comfort the eyes and ſpirits, eſpecially when the ſun is not glaring, but over-caſt; or when the moon ſhineth.

961. THERE be divers ſorts of bracelets fit to comfort the ſpirits; and they be of three intentions; refrigerant, corroborant, and aperient. For refrigerant, I wiſh them to be of pearl, or of coral, as is uſed: and it hath been noted that coral, if the party that weareth it be indiſpoſed, will wax pale; which I believe to be true, becauſe otherwiſe diſtemper of heat will make coral loſe colour. I commend alſo beads, or little plates of *lapis lazuli*; and beads of nitre, either alone, or with ſome cordial mixture.

962. FOR corroboration and confortation, take ſuch bodies as are of aſtringent quality, without manifeſt cold. I commend bead-amber, which is full of aſtriction, but yet is unctuous, and not cold; and is conceived to impinguate thoſe that wear ſuch beads: I commend alſo beads of hartſhorn and ivory, which are of the like nature; alſo orange-beads; alſo beads of *lignum aloes*, macerated firſt in roſe-water, and dry'd.

963. FOR opening, I commend beads, or pieces of the roots of *carduus benedictus:* alſo of the roots of piony the male; and of orrice; and of *calamus aromaticus*; and of rue.

964. THE cramp (no doubt) cometh of contraction of ſinews; which is manifeſt, in that it cometh either by cold or dryneſs; as after conſumptions, and long agues; for cold and dryneſs do (both of them) contract, and corrugate. We ſee alſo, that chafing a little above the place in pain, eaſeth the cramp; which is wrought by the dilatation of the contracted ſinews by heat. There are in uſe, for the prevention of the cramp, two things; the one rings of ſea-horſe teeth worn upon the fingers; the other bands of green periwinkle, (the herb) tied about the calf of the leg, or the thigh, *&c.* where the cramp uſeth to come. I do find this the more ſtrange, becauſe neither of theſe have any relaxing virtue, but rather the contrary. I judge there-

fore, that their working is rather upon the ſpirits, within the nerves, to make them ſtrive leſs, than upon the bodily ſubſtance of the nerves.

965. I would have trial made of two other kinds of bracelets, for comforting the heart and ſpirits; the one of the trochiſk of vipers, made into little pieces of beads; for ſince they do great good inwards, (eſpecially for peſtilent agues) it is like they will be effectual outwards; where they may be applied in greater quantity. There would be trochiſk likewiſe made of ſnakes; whoſe fleſh dried, is thought to have a very opening and cordial virtue. The other is, of beads made of the ſcarlet powder, which they call *kermes*; which is the principal ingredient in their cordial confection *alkermes:* the beads would be made up with amber-griſe, and ſome pomander.

966. IT hath been long received, and confirmed by divers trials; that the root of the male-piony dried, tied to the neck, doth help the falling-ſickneſs; and likewiſe the *incubus*, which we call the mare. The cauſe of both theſe diſeaſes, and eſpecially of the epilepſy from the ſtomach, is the groſſneſs of the vapours which riſe and enter into the cells of the brain: and therefore the working is by extreme and ſubtile attenuation; which that ſimple hath. I judge the like to be in *caſtoreum*, muſk, rue-ſeed, *agnus caſtus* ſeed, *&c.*

967. THERE is a ſtone which they call the blood-ſtone, which worn is thought to be good for them that bleed at the noſe: which (no doubt) is by aſtriction and cooling of the ſpirits. *Quaere*, if the ſtone taken out of the toad's head, be not of the like virtue; for the toad loveth ſhade and coolneſs.

968. LIGHT may be taken from the experiment of the horſe-tooth ring, and the garland of periwinkle, how that thoſe things which aſſuage the ſtrife of the ſpirits, do help diſeaſes contrary to the intention deſired: for in the curing of the cramp, the intention is to relax the ſinews, but the contraction of the ſpirits, that they ſtrive leſs, is the beſt help: ſo to procure eaſy travails of women, the intention is to bring down the child; but the beſt help is, to ſtay the coming down too faſt: whereunto they ſay, the toad-ſtone likewiſe helpeth. So in peſtilent fevers, the intention is to expel the infection by ſweat and evaporation; but the beſt means to do it is by nitre, *diaſcordium*, and other cool things, which do for a time arreſt the expulſion, till nature can do it more quietly. For as one ſaith prettily; in the quenching of the flame of a peſtilent ague, nature is like people that come to quench the fire of a houſe; which are ſo buſy, as one of them letteth another. Surely it is an excellent axiom, and of manifold uſe, that whatſoever appeaſeth the contention of the ſpirits, furthereth their action.

969. THE writers of natural magick commend the wearing of the ſpoil of a ſnake, for preſerving of health. I doubt it is but a conceit; for that the ſnake is thought to renew her youth, by caſting her ſpoil. They might as well take the beak of an eagle, or a piece of a hartſhorn, becauſe thoſe renew.

970. IT hath been anciently received, (for *Pericles* the *Athenian* uſed it) and it is yet in uſe, to wear little bladders of quickſilver, or tablets of arſenick, as preſervatives againſt the plague: not as they conceive for any comfort they yield to the ſpirits, but for that being poiſons themſelves, they draw the venom to them from the ſpirits.

971. VIDE the experiments 95, 96, and 97, touching the ſeveral ſympathies and antipathies for medicinal uſe.

972. IT is ſaid, that the guts or ſkin of a wolf being applied to the belly, do cure the colick. It is true, that the wolf is a beaſt of great edacity and digeſtion; and ſo it may be the parts of him comfort the bowels.

973. WE ſee ſcare-crows are ſet up to keep birds from corn and fruit; it is reported by ſome, that the head of a wolf, whole, dried, and hanged up in a dove-houſe, will ſcare away vermin; ſuch as are weaſles, pole-cats, and the like. It may be the head of a dog will do as much; for thoſe vermin with us, know dogs better than wolves.

974. The brains of ſome creatures, (when their heads are roaſted) taken in wine, are ſaid to ſtrengthen the memory; as the brains of hairs, brains of hens, brains of deers, *&c.* And it ſeemeth to be incident to the brains of thoſe creatures that are fearful.

975. THE ointment that witches uſe, is reported to be made of the fat of children digged out of their graves; of the juices of ſmallage, wolf-bane, and cinquefoil, mingled with the meal of fine wheat. But I ſuppoſe, that the ſoporiferous medicines are likeſt to do it; which are henbane, hemlock, mandrake, moon-ſhade, tobacco, *opium*, ſaffron, poplar-leaves, *&c.*

976. IT is reported by ſome, that the affections of beaſts when they are in ſtrength, do add ſome virtue unto inanimate things; as that the ſkin of a ſheep, devoured by a wolf, moveth itching; that a ſtone bitten by a dog in anger, being thrown at him, drunk in powder, provoketh choler.

977. IT hath been obſerved, that the diet of women with child, doth work much upon the infant; as if the mother eat quinces much, and coriander-ſeed, (the nature of both which is to repreſs and ſtay vapours that aſcend to the brain) it will make the child ingenious: and on the contrary ſide, if the mother eat (much) onions, or beans, or ſuch vaporous food; or drink wine, or ſtrong drink immoderately; or faſt much; or be given to much muſing; (all which ſend or draw vapours to the head) it endangereth the child to become lunatick, or of imperfect memory: and I make the ſame judgment of tobacco often taken by the mother.

978. THE writers of natural magick report, that the heart of an ape worn near the heart, comforteth the heart, and increaſeth audacity. It is true, that the ape is a merry and bold beaſt. And that the ſame heart likewiſe of an ape, applied to the neck or head, helpeth the wit; and is good for the falling-ſickneſs: the ape alſo is a witty beaſt, and hath a dry brain; which may be ſome cauſe of attenuation of vapours in the head. Yet it is ſaid to move dreams alſo. It may be the heart of a man would do more, but that it is more againſt mens minds to uſe it; except it be in ſuch as wear the reliques of ſaints.

979. THE fleſh of a hedge-hog dreſſed and eaten, is ſaid to be a great drier: it is true, that the juice of a hedge-hog muſt needs be harſh and dry, becauſe it putteth forth ſo many prickles: for plants alſo that are full of prickles are generally dry; as briars, thorns, berberries; and therefore the aſhes of an hedge-hog are ſaid to be a great deſiccative of fiſtula's.

980. MUMMY hath great force in ſtanching of blood; which, as it may be aſcribed to the mixture of balms that are glutinous; ſo it may alſo partake of a ſecret propriety, in that the blood draweth man's fleſh. And it is approved, that the moſs which groweth upon the ſkull of a dead man unburied, will ſtanch blood potently: and ſo do the dregs, or powder of blood, ſever'd from the water, and dried.

981. IT hath been practiſed, to make white ſwallows, by anointing of the eggs with oil. Which effect may be produced, by the ſtopping of the

pores of the ſhell, and making the juice that putteth forth the feathers afterwards, more penurious. And it may be, the anointing of the eggs will be as effectual, as the anointing of the body; of which *vide* the experiment 93.

982. IT is reported, that the white of an egg, or blood, mingled with ſalt-water, doth gather the ſaltneſs, and maketh the water ſweeter. This may be by adheſion; as in the ſixth experiment of clarification: it may be alſo, that blood, and the white of an egg, (which is the matter of a living creature) have ſome ſympathy with ſalt: for all life hath a ſympathy with ſalt. We ſee, that ſalt laid to a cut finger healeth it; ſo as it ſeemeth ſalt draweth blood, as well as blood draweth ſalt.

983. IT hath been anciently received, that the ſea hare hath an antipathy with the lungs, (if it cometh near the body) and erodeth them. Whereof the cauſe is conceived to be, a quality it hath of heating the breath and ſpirits; as *cantharides* have upon the watry parts of the body; as urine and hydropical water. And it is a good rule, that whatſoever hath an operation upon certain kinds of matters, that, in man's body, worketh moſt upon thoſe parts wherein that kind of matter aboundeth.

984. GENERALLY, that which is dead, or corrupted, or excerned, hath antipathy with the ſame thing when it is alive, and when it is ſound; and with thoſe parts which do excern: as a carcaſe of man is moſt infectious and odious to man; a carrion of an horſe to an horſe, *&c.* purulent matter of wounds, and ulcers, carbuncles, pocks, ſcabs, leproſy, to ſound fleſh; and the excrement of every ſpecies to that creature that excerneth them: but the excrements are leſs pernicious than the corruptions.

985. IT is a common experience, that dogs know the dog-killer; when, as in times of infection, ſome petty fellow is ſent out to kill the dogs; and that though they have never ſeen him before, yet they will all come forth, and bark, and fly at him.

986. THE relations touching the force of imagination, and the ſecret inſtincts of nature, are ſo uncertain, as they require a great deal of examination, ere we conclude upon them. I would have it firſt throughly enquired, whether there be any ſecret paſſages of ſympathy between perſons of near blood; as parents, children, brothers, ſiſters, nurſe children, huſbands, wives, *&c.* There be many reports in hiſtory, that upon the death of perſons of ſuch nearneſs, men have had an inward feeling of it. I my ſelf remember, that being in *Paris*, and my father dying in *London*, two or three days before my father's death, I had a dream, which I told to divers *Engliſh* gentlemen; that my father's houſe in the country was plaiſter'd all over with black mortar. There is an opinion abroad, (whether idle or no I cannot ſay) that loving and kind huſbands have a ſenſe of their wives breeding child, by ſome accident in their own body.

987. NEXT to thoſe that are near in blood, there may be the like paſſage, and inſtincts of nature, between great friends and enemies: and ſometimes the revealing is unto another perſon, and not to the party himſelf. I remember *Philippus Commineus*, (a grave writer) reporteth, that the archbiſhop of *Vienna*, (a reverend prelate) ſaid (one day) after maſs, to king *Lewis* the eleventh of *France*; ſir, your mortal enemy is dead; what time duke *Charles* of *Burgundy* was ſlain at the battle of *Granſon* againſt the *Switzers*. Some trial alſo would be made, whether pact or agreement do any thing; as if two friends ſhould agree, that ſuch a day in every week, they being in far diſtant places, ſhould pray one for another; or ſhould put on a ring or tablet, one for

for another's ſake; whether if one of them ſhould break their vow and promiſe, the other ſhould have any feeling of it in abſence.

988. If there be any force in imaginations and affections of ſingular perſons; it is probable the force is much more in the joint imaginations and affections of multitudes: as if a victory ſhould be won or loſt in remote parts, whether is there not ſome ſenſe thereof in the people whom it concerneth; becauſe of the great joy or grief that many men are poſſeſs'd with at once? *Pius Quintus*, at the very time when that memorable victory was won by the *Chriſtians* againſt the *Turks*, at the naval battle of *Lepanto*, being then hearing of cauſes in conſiſtory, brake off ſuddenly, and ſaid to thoſe about him, it is now more time we ſhould give thanks to God, for the great victory he hath granted us againſt the *Turks*: it is true, that victory had a ſympathy with his ſpirit; for it was merely his work to conclude that league. It may be that revelation was divine; but what ſhall we ſay then to a number of examples amongſt the *Grecians* and *Romans*? Where the people being in theaters at plays, have had news of victories and overthrows, ſome few days before any meſſenger could come.

It is true, that they may hold in theſe things, which is the general root of ſuperſtition: namely, that men obſerve when things hit, and not when they miſs; and commit to memory the one, and forget and paſs over the other. But touching divination, and the miſgiving of minds, we ſhall ſpeak more when we handle in general the nature of minds, and ſouls, and ſpirits.

989. We have given formerly ſome rules of imagination; and touching the fortifying of the ſame. We have ſet down alſo ſome few inſtances and directions, of the force of imagination upon beaſts, birds, *&c.* upon plants, and upon inanimate bodies: wherein you muſt ſtill obſerve, that your trials be upon ſubtle and light motions, and not the contrary; for you will ſooner by imagination bind a bird from ſinging, than from eating or flying: and I leave it to every man, to chuſe experiments, which himſelf thinketh moſt commodious; giving now but a few examples of every of the three kinds.

990. Use ſome imaginant, (obſerving the rules formerly preſcribed) for binding of a bird from ſinging; and the like of a dog from barking. Try alſo the imagination of ſome, whom you ſhall accommodate with things to fortify it, in cock-fights, to make one cock more hardy, and the other more cowardly. It would be tried alſo in flying of hawks; or in courſing of a deer, or hart, with greyhounds; or in horſe-races; and the like comparative motions: for you may ſooner by imagination quicken or ſlack a motion, than raiſe or ceaſe it; as it is eaſier to make a dog go ſlower, than to make him ſtand ſtill that he may not run.

991. In plants alſo you may try the force of imagination upon the lighter ſort of motions: as upon the ſudden fading, or lively coming up of herbs; or upon their bending one way or other; or upon their cloſing and opening, *&c.*

992. For inanimate things, you may try the force of imagination, upon ſtaying the working of beer when the barm is put in; or upon the coming of butter or cheeſe, after the cherning, or the rennet be put in.

993. It is an ancient tradition every where alledged, for example of ſecret proprieties and influxes, that the *torpedo marina*, if it be touched with a long ſtick, doth ſtupify the hand of him that toucheth it. It is one degree of working at diſtance, to work by the continuance of a fit medium; as ſound will be convey'd to the ear, by ſtriking upon a bow-ſtring, if the horn of the bow be held to the ear.

994. The

994. THE writers of natural magick do attribute much to the virtues that come from the parts of living creatures; ſo as they be taken from them, the creatures remaining ſtill alive: as if the creature ſtill living did infuſe ſome immateriate virtue and vigour into the part ſever'd. So much may be true; that any part taken from a living creature newly ſlain, may be of greater force, than if it were taken from the like creature dying of it ſelf, becauſe it is fuller of ſpirit.

995. TRIAL would be made of the like parts of individuals in plants and living creatures; as to cut off a ſtock of a tree; and to lay that which you cut of to putrefy, to ſee whether it will decay the reſt of the ſtock: or if you ſhould cut off part of the tail, or leg of a dog or a cat, and lay it to putrefy, and ſo ſee whether it will feſter, or keep from healing, the part which remaineth.

996. IT is received, that it helpeth to continue love, if one wear a ring, or a bracelet of the hair of the party beloved. But that may be by the exciting of the imagination: and perhaps a glove, or other like favour, may as well do it.

997. THE ſympathy of individuals, that have been entire, or have touched, is of all others the moſt incredible: yet according unto our faithful manner of examination of nature, we will make ſome little mention of it. The taking away of warts, by rubbing them with ſomewhat that afterwards is put to waſte and conſume, is a common experiment; and I do apprehend it the rather, becauſe of my own experience. I had from my childhood a wart upon one of my fingers: afterwards when I was about ſixteen years old, being then at *Paris*, there grew upon both my hands a number of warts, (at the leaſt an hundred) in a month's ſpace. The *Engliſh* ambaſſador's lady, who was a woman far from ſuperſtition, told me one day, ſhe would help me away with my warts: whereupon ſhe got a piece of lard with the ſkin on, and rubbed the warts all over with the fat ſide; and amongſt the reſt, that wart which I had had from my childhood; then ſhe nailed the piece of lard with the fat towards the ſun, upon a poſt of her chamber-window, which was to the ſouth. The ſucceſs was, that within five weeks ſpace all the warts went quite away: and that wart which I had ſo long endured, for company. But at the reſt I did little marvel, becauſe they came in a ſhort time, and might go away in a ſhort time again: but the going away of that which had ſtayed ſo long, doth yet ſtick with me. They ſay the like is done by the rubbing of warts with a green elder-ſtick, and then burying the ſtick to rot in muck. It would be tried with corns and wens, and ſuch other excreſcences. I would have it alſo tried with ſome parts of living creatures, that are neareſt the nature of excreſcences; as the combs of cocks, the ſpurs of cocks, the horns of beaſts, *&c.* And I would have it tried both ways; both by rubbing thoſe parts with lard, or elder, as before; and by cutting off ſome piece of thoſe parts, and laying it to conſume: To ſee whether it will work any effect towards the conſumption of that part which was joined with it.

998. IT is conſtantly received and avouched, that the anointing of the weapon that maketh the wound, will heal the wound it ſelf. In this experiment, upon the relation of men of credit, (though my ſelf, as yet, am not fully inclined to believe it) you ſhall note the points following: firſt, the ointment wherewith this is done, is made of divers ingredients; whereof the ſtrangeſt and hardeſt to come by, are the moſs upon the ſkull of a dead man unburied; and the fats of a boar, and a bear, killed in the act of generation.

ration. Theſe two laſt I could eaſily ſuſpect to be preſcribed as a ſtarting hole; that if the experiment proved not, it might be pretended that the beaſts were not killed in the due time; for as for the moſs, it is certain there is great quantity of it in *Ireland*, upon ſlain bodies, laid on heaps unburied. The other ingredients are, the blood-ſtone in powder, and ſome other things, which ſeem to have a virtue to ſtanch blood; as alſo the moſs hath. And the deſcription of the whole ointment is to be found in the chymical diſpenſatory of *Crollius*. Secondly, the ſame kind of ointment applied to the hurt it ſelf, worketh not the effect; but only applied to the weapon. Thirdly, (which I like well) they do not obſerve the confecting of the ointment under any certain conſtellation; which commonly is the excuſe of magical medicines when they fail, that they were not made under a fit figure of heaven. Fourthly, it may be applied to the weapon, though the party hurt be at great diſtance. Fifthly, it ſeemeth the imagination of the party to be cured, is not needful to concur; for it may be done without the knowledge of the party wounded: and thus much has been tried, that the ointment (for experiment's ſake) hath been wiped off the weapon, without the knowledge of the party hurt, and preſently the party hurt has been in great rage of pain, till the weapon was re-anointed. Sixthly, it is affirmed, that if you cannot get the weapon, yet if you put an inſtrument of iron, or wood, reſembling the weapon, into the wound, whereby it bleedeth, the anointing of that inſtrument will ſerve and work the effect. This I doubt ſhould be a device to keep this ſtrange form of cure in requeſt and uſe: becauſe many times you cannot come by the weapon it ſelf. Seventhly, the wound muſt be at firſt waſhed clean with white wine, or the party's own water; and then bound up cloſe in fine linnen, and no more dreſſing renewed till it be whole. Eighthly, the ſword it ſelf muſt be wrapped up cloſe, as far as the ointment goeth, that it taketh no wind. Ninthly, the ointment, if you wipe it off from the ſword, and keep it, will ſerve again; and rather increaſe in virtue, than diminiſh. Tenthly, it will cure in far ſhorter time, than ointments of wounds commonly do. Laſtly, it will cure a beaſt as well as a man; which I like beſt of all the reſt, becauſe it ſubjecteth the matter to an eaſy trial.

*Experiment ſolitary touching ſecret proprieties.*

999. I would have men know, that though I reprehend the eaſy paſſing over of the cauſes of things, by aſcribing them to ſecret and hidden virtues, and proprieties, (for this hath arreſted and laid aſleep all true enquiry and indications;) yet I do not underſtand, but that in the practical part of knowledge, much will be left to experience and probation, whereunto indication cannot ſo fully reach: and this not only *in ſpecie*, but *in individuo*. So in phyſick, if you will cure the jaundice, it is not enough to ſay, that the medicine muſt not be cooling; for that will hinder the opening which the diſeaſe requireth: that it muſt not be hot; for that will exaſperate choler: that it muſt go to the gall; for there is the obſtruction which cauſeth the diſeaſe, *&c.* But you muſt receive from experience, that powder of *Chamaepytis*, or the like, drunk in beer, is good for the jaundice. So again a wiſe phyſician doth not continue ſtill the ſame medicine to a patient; but he will vary, if the firſt medicine doth not apparently ſucceed: for of thoſe remedies that are good for the jaundice, ſtone, agues, *&c.* that will do good in one body, which will not do good in another; according to the correſpondence the medicine hath to the individual body.

*Expe-*

*Experiment ſolitary touching the general ſympathy of mens ſpirits.*

1000. THE delight which men have in popularity, fame, honour, ſubmiſſion, and ſubjection of other mens minds, wills, or affections (although theſe things may be deſired for other ends) ſeemeth to be a thing in it ſelf without contemplation of conſequence, grateful and agreeable to the nature of man. This thing (ſurely) is not without ſome ſignification, s if all ſpirits and ſouls of men, came forth out of one divine *limbus*; elſe why men be ſo much affected with that which others think or ſay? The beſt temper of minds deſireth good name and true honour: the lighter, popularity and applauſe: the more depraved, ſubjection and tyranny; as is ſeen in great conquerors and troublers of the world: and yet more in arch-hereticks; for the introducing of new doctrines, is likewiſe an affectation of tyranny over the underſtandings and beliefs of men.

# PHYSIOLOGICAL REMAINS.

*Inquiſitions touching the compounding of metals.*

TO make proof of the incorporation of iron with flint, or other ſtone. For if it can be incorporated without over-great charge, or other incommodity, the cheapneſs of the flint or ſtone, doth make the compound ſtuff profitable for divers uſes. The doubts may be three in number.

FIRST, Whether they will incorporate at all, otherwiſe than to a body that will not hold well together, but become brittle and uneven?

SECONDLY, Although it ſhould incorporate well, yet whether the ſtuff will not be ſo ſtubborn as it will not work well with a hammer, whereby the charge in working will overthrow the cheapneſs of the material?

THIRDLY, Whether they will incorporate, except the iron and ſtone be firſt calcined into powder? And if not, whether the charge of the calcination will not eat out the cheapneſs of the material?

THE uſes are moſt probable to be; firſt for the implements of the kitchin; as ſpits, ranges, cobirons, pots, *&c.* then for the wars, as ordnance, portculliſes, grates, chains, *&c.*

NOTE; the finer works of iron are not ſo probable to be ſerved with ſuch a ſtuff; as locks, clocks, ſmall chains, *&c.* becauſe the ſtuff is not like to be tough enough.

FOR the better uſe in compariſon of iron, it is like the ſtuff will be far lighter; for the weight of iron to flint is double and a third part; and, ſecondly, it is like to ruſt not ſo eaſily, but to be more clean.

THE ways of tryal are two: firſt, by the iron and ſtone of themſelves, wherein it muſt be enquired, what are the ſtones that do eaſilieſt melt. Secondly, with an additament, wherein brimſtone is approved to help to the melting of iron or ſteel. But then it muſt be conſidered, whether the charge of the additament will not deſtroy the profit.

IT muſt be known alſo, what proportion of the ſtone the iron will receive to incorporate well with it, and that with once melting; for if either the proportion be too ſmall, or that it cannot be received but piece-meal by ſeveral meltings, the work cannot be of value.

To make proof of the incorporating of iron and braſs. For the cheapneſs of the iron in compariſon of the braſs, if the uſes may be ſerved, doth promiſe profit. The doubt will be, touching their incorporating; for that it is approved, that iron will not incorporate, neither with braſs, nor other metals of it ſelf, by ſimple fire: ſo as the enquiry muſt be upon the calcination, and the additament, and the charge of them.

THE uſes will be for ſuch things as are now made of braſs, and might be

as

as well ſerved by the compound ſtuff; wherein the doubts will be chiefly of the toughneſs, and of the beauty.

First, therefore, if braſs ordnance could be made of the compound ſtuff, in reſpect of the cheapneſs of the iron, it would be of great uſe.

The vantage which braſs ordnance hath over iron, is chiefly, as I ſuppoſe, becauſe it will hold the blow, though it be driven far thinner than the iron can be; whereby it ſaveth both in the quantity of the material, and in the charge and commodity of mounting and carriage, in regard, by reaſon of the thinneſs, it beareth much leſs weight: there may be alſo ſomewhat in being not ſo eaſily over-heated.

Secondly, for the beauty. Thoſe things wherein the beauty or luſtre are eſteemed, are, andirons, and all manner of images, and ſtatues, and columns, and tombs, and the like. So as the doubt will be double for the beauty; the one whether the colour will pleaſe ſo well, becauſe it will not be ſo like gold as braſs? The other, whether it will poliſh ſo well? Wherein for the latter it is probable it will; for ſteel gloſſes are more reſplendent than the like plates of braſs would be; and ſo is the glittering of a blade. And beſides I take it, andiron braſs, which they call white braſs, hath ſome mixture of tin to help the luſtre. And for the golden colour, it may be by ſome ſmall mixture of orpiment, ſuch as they uſe to braſs in the yellow alchymy; it will eaſily recover that which the iron loſeth. Of this the eye muſt be the judge upon proof made.

But now for pans, pots, curfews, counters, and the like, the beauty will not be ſo much reſpected, ſo as the compound ſtuff is like to paſs.

For the better uſe of the compound ſtuff, it will be ſweeter and cleaner than braſs alone, which yieldeth a ſmell or ſoilneſs; and therefore may be better for the veſſels of the kitchen and brewing. It will alſo be harder than braſs, where hardneſs may be required.

For the tryal, the doubts will be two: firſt, the over-weight of braſs towards iron, which will make iron float on the top in the melting. This perhaps will be holpen with the calaminar ſtone, which conſenteth ſo well with braſs, and as I take it, is lighter than iron. The other doubt will be, the ſtiffneſs and dryneſs of iron to melt; which muſt be holpen either by moiſtening the iron, or opening it. For the firſt, perhaps ſome mixture of lead will help. Which is as much more liquid than braſs, as iron is leſs liquid. The opening may be holpen by ſome mixture of ſulphur, ſo as the tryals would be with braſs, iron, calaminar ſtone and ſulphur; and then again with the ſame compoſition, and an addition of ſome lead; and in all this the charge muſt be conſidered, whether it eat not out the profit of the cheapneſs of iron?

There be two proofs to be made of incorporation of metals for magnificence and delicacy. The one for the eye, and the other for the ear. Statue-metal, and bell-metal, and trumpet-metal, and ſtring-metal; in all theſe, though the mixture of braſs or copper ſhould be dearer than the braſs it ſelf, yet the pleaſure will advance the price to profit.

First therefore for ſtatue-metal, ſee *Pliny*'s mixtures, which are almoſt forgotten, and conſider the charge.

Try likewiſe the mixture of tin in large proportion with copper, and obſerve the colour and beauty, it being poliſhed. But chiefly let proof be made of the incorporating of copper or braſs with glaſs-metal, for that is cheap, and is like to add a great glory and ſhining.

For bell-metal. Firſt, it is to be known what is the compoſition which

is now in uſe. Secondly, it is probable that it is the dryneſs of the metal that doth help the clearneſs of the ſound, and the moiſtneſs that dulleth it: and therefore the mixtures that are probable, are ſteel, tin, glaſs-metal.

For ſtring-metal, or trumpet-metal, it is the ſame reaſon; ſave that glaſs-metal may not be uſed, becauſe it will make it too brittle; and trial may be made with mixture of ſilver, it being but a delicacy with iron or braſs.

To make proof of the incorporation of ſilver and tin in equal quantity, or with two parts ſilver, and one part tin, and to obſerve whether it be of equal beauty and luſtre with pure ſilver; and alſo whether it yield no ſoilineſs more than ſilver? And again, whether it will endure the ordinary fire, which belongeth to chafing-diſhes, poſnets, and ſuch other ſilver veſſels? And if it do not endure the fire, yet whether by ſome mixture of iron it may not be made more fixt? For if it be in beauty, and all the uſes aforeſaid equal to ſilver, it were a thing of ſingular profit to the ſtate, and to all particular perſons, to change ſilver plate or veſſel into the compound ſtuff, being a kind of ſilver electre, and to turn the reſt into coin. It may be alſo queſtioned, whether the compound ſtuff will receive gilding as well as ſilver, and with equal luſtre? It is to be noted, that the common allay of ſilver coin is braſs, which doth diſcolour more, and is not ſo neat as tin.

The drownings of metals within other metals, in ſuch ſort as they can never riſe again, is a thing of great profit. For if a quantity of ſilver can be ſo buried in gold, as it never will be reduced again, neither by fire, nor parting waters, nor otherways: and alſo that it ſerve all uſes as well as pure gold, it is in effect all one, as if ſo much ſilver were turned into gold; only the weight will diſcover it: yet that taketh off but half of the profit; for gold is not fully double weight to ſilver, but gold is twelve times price to ſilver.

The burial muſt be by one of theſe two ways, either by the ſmallneſs of the proportion, as perhaps fifty to one, which will be but ſix-pence gains in fifty ſhillings: or it muſt be holpen by ſomewhat which may fix the ſilver, never to be reſtored or vapoured away, when it is incorporated into ſuch a maſs of gold; for the leſs quantity is ever the harder to ſever: and for this purpoſe iron is the likeſt, or coppel-ſtuff, upon which the fire hath no power of conſumption.

The making of gold ſeemeth a thing ſcarcely poſſible; becauſe gold is the heavieſt of metals, and to add matter is impoſſible: and again, to drive metals into a narrower room than their natural extent beareth, is a condenſation hardly to be expected. But to make ſilver ſeemeth more eaſy, becauſe both quick-ſilver and lead are weightier than ſilver; ſo as there needeth only fixing, and not condenſing. The degree unto this that is already known, is infuſing of quick-ſilver in a parchment, or otherwiſe in the midſt of molten lead when it cooleth; for this ſtupifieth the quick-ſilver that it runneth no more. This trial is to be advanced three ways. Firſt, by iterating the melting of the lead, to ſee whether it will not make the quick-ſilver harder and harder. Secondly, to put realgar hot into the midſt of the quick-ſilver, whereby it may be condenſed, as well from within as without. Thirdly, to try it in the midſt of molten iron, or molten ſteel, which is a body more likely to fix the quickſilver than lead. It may be alſo tried, by incorporating powder of ſteel, or copple-duſt, by pouncing into the quick-ſilver, and ſo to proceed to the ſtupifying.

Upon glaſs, four things would be put in proof. The firſt, means to make the

the glaſs more cryſtalline. The ſecond, to make it more ſtrong for falls, and for fire, though it come not to the degree to be malleable. The third, to make it coloured by tinctures, comparable to or exceeding precious ſtones. The fourth, to make a compound body of glaſs and galletyle; that is, to have the colour milky like a *chalcedon*, being a ſtuff between a porcellane and a glaſs.

For the firſt; it is good firſt to know exactly the ſeveral materials whereof the glaſs in uſe is made; window-glaſs, *Normandy* and *Burgundy*, ale-houſe-glaſs, *Engliſh* drinking-glaſs: and then thereupon to conſider what the reaſon is of the coarſeneſs or clearneſs; and from thence to riſe to a conſideration how to make ſome additaments to the coarſer materials; to raiſe them to the whiteneſs and cryſtalline ſplendour of the fineſt.

For the ſecond; we ſee pebbles, and ſome other ſtones, will cut as fine as cryſtal, which if they will melt, may be a mixture for glaſs, and may make it more tough and more cryſtalline. Beſides, we ſee metals will vitrify; and perhaps ſome portion of the glaſs of metal vitrified, mixed in the pot of ordinary glaſs-metal, will make the whole maſs more tough.

For the third; it were good to have of coloured window-glaſs, ſuch as is coloured in the pot, and not by colours———

It is to be known of what ſtuff galletyle is made, and how the colours in it are varied; and thereupon to conſider how to make the mixture of glaſs-metal and them, whereof I have ſeen the example.

Enquire what be the ſtones that do eaſilieſt melt. Of them take half a pound, and of iron a pound and half, and an ounce of brimſtone, and ſee whether they will incorporate, being whole, with a ſtrong fire. If not, try the ſame quantities calcined: and if they will incorporate, make a plate of them, and burniſh it as they do iron.

Take a pound and a half of braſs, and half a pound of iron; two ounces of the calaminar ſtone, an ounce and a half of brimſtone, an ounce of lead; calcine them, and ſee what body they make; and if they incorporate, make a plate of it burniſhed.

Take of copper an ounce and a half, of tin an ounce, and melt them together, and make a plate of them burniſhed.

Take of copper an ounce and a half, of tin an ounce, of glaſs-metal half an ounce; ſtir them well in the boiling, and if they incorporate, make a plate of them burniſhed.

Take of copper a pound and a half, tin four ounces, braſs two ounces; make a plate of them burniſhed.

Take of ſilver two ounces, tin half an ounce; make a little ſay-cup of it, and burniſh it.

To enquire of the materials of every of the kind of glaſſes, coarſer and finer, and of the proportions.

Take an equal quantity of glaſs-metal, of ſtone calcined, and bring a pattern.

Take an ounce of vitrified metal, and a pound of ordinary glaſs-metal, and ſee whether they will incorporate, and bring a pattern.

Bring examples of all coloured glaſſes, and learn the ingredients whereby they are coloured.

Enquire of the ſubſtance of galletyle.

Articles

## Articles of queſtions touching minerals.

*The Lord* Bacon's *queſtions, with Dr.* Meverel's *ſolutions, concerning the compounding, incorporating, or union of metals or minerals; which ſubject is the firſt letter of his lordſhip's alphabet.*

Q. WITH what metals gold will incorporate by ſimple colliquefaction, and with what not? And in what quantity it will incorporate; and what kind of body the compound makes?

*A.* GOLD with ſilver, which was the ancient *electrum:* gold with quick-ſilver: gold with lead: gold with copper: gold with braſs: gold with iron: gold with tin.

So likewiſe of ſilver: ſilver with quick-ſilver: ſilver with lead: ſilver with copper: ſilver with braſs: ſilver with iron: (*Plinius ſecund. lib.* xxxiii. 9. *Miſcuit denario triumvir Antonius ferrum,*) ſilver with tin.

So likewiſe of quick-ſilver: quick-ſilver with lead: quick-ſilver with copper: quick-ſilver with braſs: quick-ſilver with iron: quick-ſilver with tin.

So of lead: lead with copper: lead with braſs: lead with iron: lead with tin. *Plin.* xxxiv. 9.

So of copper: copper with braſs: copper with iron: copper with tin.

So of braſs: braſs with iron: braſs with tin.

So of iron: iron with tin.

*What be the compound metals that are common and known? And what are the proportions of their mixtures?* As,

LATTEN of braſs, and the calaminar ſtone.

PEWTER of tin and lead.

BELL-metal of *&c.* and the counterfeit plate, which they call alchymy.

THE decompoſitees of three metals or more, are too long to enquire of, except there be ſome compoſitions of them already obſerved.

IT is alſo to be obſerved, whether any two metals which will not mingle of themſelves, will mingle with the help of another; and what.

WHAT compounds will be made of metal with ſtone and other foſſils; as latten is made with braſs and the calaminar ſtone; as all the metals incorporate with vitriol; all with iron powdered; all with flint, *&c.*

SOME few of theſe would be inquired of, to diſcloſe the nature of the reſt.

WHETHER metals or other foſſils will incorporate with molten glaſs, and what body it makes?

THE quantity in the mixture would be well conſidered; for ſome ſmall quantity perhaps will incorporate, as in the allays of gold and ſilver coin.

UPON the compound body, three things are chiefly to be obſerved; the colour; the fragility or pliantneſs: the volatility of fixation, compared with the ſimple bodies.

FOR preſent uſe or profit, this is the rule: conſider the price of the two ſimple bodies; conſider again the dignity of the one above the other in uſe; then ſee if you can make a compound, that will ſave more in price, than it will loſe in dignity of the uſe.

As for example; conſider the price of braſs ordnance; conſider again the price of iron ordnance, and then conſider wherein the braſs ordnance doth excel the iron ordnance in uſe: then if you can make a compound of braſs and iron that will be near as good in uſe, and much cheaper in price, then there is profit both to the private, and the common-wealth. So of gold and

and ſilver, the price is double of twelve: the dignity of gold above ſilver is not much, the ſplendour is alike, and more pleaſing to ſome eyes, as in cloth of ſilver, ſilvered rapiers, *&c.* The main dignity is, that gold bears the fire, which ſilver doth not: but that is an excellency in nature, but it is nothing at all in uſe; for any dignity in uſe I know none, but that ſilvering will ſully and canker more than gilding; which if it might be corrected with a little mixture of gold, there is profit: and I do ſomewhat marvel, that the latter ages have loſt the ancient *electrum*, which was a mixture of ſilver with gold: whereof I conceive there may be much uſe, both in coin, plate, and gilding.

It is to be noted, that there is in the verſion of metals impoſſibility, or at leaſt great difficulty, as in making of gold, ſilver, copper. On the other ſide, in the adulterating or counterfeiting of metals, there is deceit and villany. But it ſhould ſeem there is a middle way, and that is by new compounds, if the ways of incorporating were well known.

What incorporation or imbibition metals will receive from vegetables, without being diſſolved in their ſubſtance: as when the armourers make their ſteel more tough and pliant, by aſperſion of water and juice of herbs; when gold being grown ſomewhat churliſh by recovering, is made more pliant by throwing in ſhreds of tanned leather, or by leather oiled.

Note; that in theſe and the like ſhews of imbibition, it were good to try by the weights, whether the weight be increaſed or no; for if it be not, it is to be doubted that there is no imbibition of ſubſtance, but only that the application of that other body, doth diſpoſe and invite the metal to another poſture of parts, than of it ſelf it would have taken.

After the incorporation of metals by ſimple colliquefaction, for the better diſcovery of the nature, and conſents and diſſents of metals, it would be likewiſe tried by incorporating of their diſſolutions.

What metals being diſſolved in ſtrong waters will incorporate well together, and what not? Which is to be enquired particularly, as it was in colliquefactions.

There is to be obſerved in thoſe diſſolutions which will not eaſily incorporate, what the effects are: as the bullition; the precipitation to the bottom; the ejaculation towards the top; the ſuſpenſion in the midſt; and the like.

Note; that the diſſents of the menſtrual or ſtrong waters, may hinder the incorporation, as well as the diſſents of the metals themſelves; therefore where the *menſtrua* are the ſame, and yet the incorporation followeth not, you may conclude the diſſent is in the metals; but where the *menſtrua* are ſeveral, not ſo certain.

*Dr.* Meverell's *anſwers to the foregoing queſtions, concerning the compounding, incorporating, or union of metals and minerals.*

Gold will incorporate with ſilver in any proportion. *Plin. lib.* xxxiii. *cap.* 4. *Omni auro ineſt argentum vario pondere; alibi dena, alibi nona, alibi octava parte—Ubicunque quinta argenti portio invenitur, electrum vocatur.* The body remains fixt, ſolid, and coloured, according to the proportion of the two metals.

Gold with quick-ſilver eaſily mixeth, but the product is imperfectly fixed; and ſo are all other metals incorporate with mercury.

Gold incorporates with lead in any proportion.

Gold incorporates with copper in any proportion, the common allay.

Gold

GOLD incorporates with braſs in any proportion. And what is ſaid of copper is true of braſs, in the union of other metals.

GOLD will not incorporate with iron.

GOLD incorporates with tin, the ancient allay, *Iſa.* i. 25.

WHAT was ſaid of gold and quick-ſilver, may be ſaid of quick-ſilver and the reſt of metals.

SILVER with lead in any proportion.

SILVER incorporates with copper. *Pliny* mentions ſuch a mixture; for *triumphales ſtatuae, lib.* xxxiii. 9. *miſcentur argento, tertia pars aeris Cyprii tenuiſſimi, quod coronarium vocant, & ſulphuris vivi quantum argenti.* The ſame is true of braſs.

SILVER incorporates not with iron. Wherefore I wonder at that which *Pliny* hath, *lib.* xxxiii. 9. *Miſcuit denario triumvir Antonius ferrum.* And what is ſaid of this is true in the reſt; for iron incorporateth with none of them.

SILVER mixes with tin.

LEAD incorporates with copper. Such a mixture was the pot-metal whereof *Pliny* ſpeaks, *lib.* xxxiv. 9. *Ternis aut quaternis libris plumbi argentarii in centenas aeris additis.*

LEAD incorporates with tin. The mixture of theſe two in equal proportions, is that which was anciently called *plumbum argentarium*, Plin. xxxiv. 17.

COPPER incorporates with tin. Of ſuch a mixture were the mirrors of the *Romans.* Plin. *Atque ut omnia de ſpeculis peragantur hoc loco, optima apud majores erant Brundiſina, ſtanno & aere miſtis, lib.* xxxiii. 9.

*Compound metals now in uſe.*

1. FINE tin. The mixture is thus; pure tin a thouſand pound, temper fifty pound, glaſs of tin three pounds.

2. COARSE pewter is made of fine tin and lead. Temper is thus made; the droſs of pure tin four pound and a half, copper half a pound.

3. BRASS is made of copper and *calaminaris.*

4. BELL-metal. Copper a thouſand pound, tin from three hundred to two hundred pound, braſs a hundred and fifty pound.

5. POT-metal, copper and lead.

6. WHITE alchymy is made of pan-braſs one pound, and *arſenicum* three ounces.

7. RED alchymy is made of copper and auripigment.

THERE be divers imperfect minerals, which will incorporate with the metals: being indeed metals inwardly, but clothed with earths and ſtones: as *pyritis, calaminaris, miſy, chalcitis, ſory, vitriolum.*

METALS incorporate not with glaſs, except they be brought into the form of glaſs.

METALS diſſolved. The diſſolution of gold and ſilver diſagree, ſo that in their mixture there is great ebullition, darkneſs, and in the end a precipitation of a black powder.

THE mixture of gold and mercury agree.

GOLD agrees with iron. In a word, the diſſolution of mercury and iron agree with all the reſt.

SILVER and copper diſagree, and ſo do ſilver and lead. Silver and tin agree.

*The*

*Articles of enquiry concerning minerals. The ſecond letter of the croſs-row, touching the ſeparation of metals and minerals.*

SEPARATION is of three ſorts; the firſt, is the ſeparating of the pure metal from the ore or droſs, which we call refining. The ſecond, is the drawing one metal or mineral out of another, which we call extracting. The third, is the ſeparating of any metal into its original, or *materia prima*, or element, or call them what you will; which work we will call principiation.

1. FOR refining, we are to enquire of it according to the ſeveral metals; as gold, ſilver, *&c.* Incidently we are to enquire of the firſt ſtone, or ore, or ſpar, or marcaſite of metals ſeverally, and what kind of bodies they are, and of the degrees of richneſs. Alſo we are to enquire of the means of ſeparating, whether by fire, parting waters, or otherwiſe. Alſo for the manner of refining, you are to ſee how you can multiply the heat, or haſten the opening, and ſo ſave the charge in the fining.

THE means of this in three manners; that is to ſay, in the blaſt of the fire; in the manner of the furnace, to multiply heat by union and reflexion; and by ſome additament, or medicines which will help the bodies to open them the ſooner.

NOTE the quickning of the blaſt, and the multiplying of the heat in the furnace, may be the ſame for all metals; but the additaments muſt be ſeveral, according to the nature of the metals. Note again, that if you think that the multiplying of the additaments in the ſame proportion, that you multiply the ore, the work will follow, you may be deceived: for quantity in the paſſive will add more reſiſtance, than the ſame quantity in the active will add force.

2. FOR extracting, you are to enquire what metals contain others, and likewiſe what not; as lead, ſilver; copper, ſilver, *&c.*

NOTE, although the charge of extraction ſhould exceed the worth, yet that is not the matter: For at leaſt it will diſcover nature and poſſibility, the other may be thought on afterwards.

WE are likewiſe to enquire what the differences are of thoſe metals which contain more or leſs other metals, and how that agrees with the poorneſs or richneſs of the metals or ore in themſelves. As the lead that contains moſt ſilver is accounted to be more brittle, and yet otherwiſe poorer in it ſelf.

3. FOR principiation, I cannot affirm whether there be any ſuch thing or not; and I think the chymiſts make too much ado about it: but howſoever it be, be it ſolution or extraction, or a kind of converſion by the fire; it is diligently to be enquired what ſalts, ſulphur, vitriol, mercury, or the like ſimple bodies are to be found in the ſeveral metals, and in what quantity.

*Dr.* Meverel's *anſwers to the foregoing queſtions, touching the ſeparations of metals and minerals.*

1. FOR the means of ſeparating. After that the ore is waſhed, or cleanſed from the earth, there is nothing ſimply neceſſary, ſave only a wind-furnace well framed, narrow above and at the hearth, in ſhape oval, ſufficiently fed with char-coal and ore, in convenient proportions.

FOR additions in this firſt ſeparation, I have obſerved none; the droſs the mineral brings being ſufficient. The refiners of iron obſerve, that that iron-ſtone is hardeſt to melt, which is fulleſt of metal, and that eaſieſt which hath moſt droſs. But in lead, and tin, the contrary is noted. Yet in melting of metals, when they have been calcined formerly by fire, or ſtrong-

waters, there is good uſe of additaments, as of borax, tartar, armoniack, and ſalt-petre.

2. In extracting of metals. Note, that lead and tin contain ſilver. Lead and ſilver contain gold. Iron contains braſs. Silver is beſt ſeparated from lead by the teſt. So gold from ſilver. Yet the beſt way for that is *aqua regia*.

3. For principiation. I can truly and boldly affirm, that there are no ſuch principles as ſal, ſulphur and mercury, which can be ſeparated from any perfect metals. For every part ſo ſeparated, may eaſily be reduced into perfect metal without ſubſtitution of that, or thoſe principles which chymiſts imagine to be wanting. As ſuppoſe you take the ſalt of lead; this ſalt, or as ſome name it ſulphur, may be turned into perfect lead, by melting it with the like quantity of lead which contains principles only for it ſelf.

I acknowledge that there is quick-ſilver and brimſtone found in the imperfect minerals; but thoſe are nature's remote materials, and not the chymiſt's principles. As if you diſſolve antimony by *aqua regia*, there will be real brimſtone ſwimming upon the water: as appears by the colour of the fire when it is burnt, and by the ſmell.

*Articles of enquiry concerning metals and minerals. The third letter of the croſs-row touching the variation of metals into ſeveral ſhapes, bodies, or natures, the particulars whereof follow:*

Tincture: turning to ruſt: calcination: ſublimation: precipitation: amalgamatiſing, or turning into a ſoft body: vitrification: opening or diſſolving into liquor: ſproutings, or branchings, or arboreſcents: induration and mollification: making tough or brittle: volatility and fixation: tranſmutation, or verſion.

For tincture: it is to be enquired how metal may be tinged through and through, and with what, and into what colours; as tinging ſilver yellow, tinging copper white, and tinging red, green, blue; eſpecially with keeping the luſtre.

Item, tincture of glaſſes.

Item, tincture of marble, flint, or other ſtone.

For turning into ruſt, two things are chiefly to be enquired; by what corroſives it is done, and into what colours it turns; as lead into white, which they call *ceruſs*; iron into yellow, which they call *crocus martis*; quickſilver into vermilion; braſs into green, which they call verdigriſe.

For calcination; how every metal is calcined, and into what kind of body, and what is the exquiſiteſt way of calcination.

For ſublimation; to enquire the manner of ſubliming, and what metals endure ſubliming, and what body the ſublimate makes.

For precipitation likewiſe; by what ſtrong water every metal will precipitate, and with what additaments, and in what time, and into what body.

So for amalgama; what metals will endure it, what are the means to do it, and what is the manner of the body.

For vitrification likewiſe; what metals will endure it, what are the means to do it, into what colour it turns; and farther, where the whole metal is turned into glaſs, and where the metal doth but hang in the glaſſy parts; alſo what weight the vitrified body bears, compared with the crude body; alſo becauſe vitrification is accounted a kind of death of metals, what vitrification will admit of turning back again, and what not.

For diſſolution into liquor, we are to enquire what is the proper *menſtruum* to diſſolve any metal, and in the negative, what will touch upon the

one

one, and not upon the other, and what ſeveral *menſtrua* will diſſolve any metal, and which moſt exactly. *Item*, the proceſs or motion of the diſſolution, the manner of riſing, boiling, vapouring more violent, or more gentle, cauſing much heat or leſs. *Item*, the quantity or charge that the ſtrong water will bear, and then give over. *Item*, the colour into which the liquor will turn. Above all it is to be enquired, whether there be any *menſtruum* to diſſolve any metal that is not fretting, or corroding, and openeth the body by ſympathy, and not by mordacity, or violent penetration.

For ſprouting or branching, though it be a thing but tranſitory, and a kind of toy or pleaſure, yet there is a more ſerious uſe of it; for that it diſcovereth the delicate motions of ſpirits, when they put forth and cannot get forth, like unto that which is in vegetables.

For induration, or mollification; it is to be enquired what will make metals harder and harder, and what will make them ſofter and ſofter. And this enquiry tendeth to two ends: firſt, for uſe; as to make iron ſoft by the fire makes it malleable. Secondly, becauſe induration is a degree towards fixation, and mollification towards volatility; and therefore the enquiry of them will give light towards the other.

For tough and brittle, they are much of the ſame kind, but yet worthy of an enquiry apart, eſpecially to join hardneſs with toughneſs, as making glaſs malleable, *&c.* and making blades ſtrong to reſiſt and pierce, and yet not eaſy to break.

For volatility and fixation. It is a principal branch to be enquired: the utmoſt degree of fixation is that whereon no fire will work, nor ſtrong water joined with fire, if there be any ſuch fixation poſſible. The next is, when fire ſimply will not work without ſtrong waters. The next is by the teſt: The next is when it will endure fire not blown, or ſuch a ſtrength of fire: The next is when it will not endure, but yet is malleable. The next is when it is not malleable, but yet is not fluent, but ſtupified. So of volatility, the utmoſt degree is when it will fly away without returning. The next is when it will fly up, but with eaſe return. The next is when it will fly upwards over the helm by a kind of exſufflation without vapouring. The next is when it will melt though not riſe. The next is when it will ſoften though not melt. Of all theſe diligent enquiry is to be made in ſeveral metals, eſpecially of the more extreme degrees.

For tranſmutation or verſion. If it be real and true, it is the fartheſt part of art, and would be well diſtinguiſhed, from extraction, from reſtitution, and from adulteration. I hear much of turning iron into copper; I hear alſo of the growth of lead in weight, which cannot be without a converſion of ſome body into lead: but whatſoever is of this kind, and well expreſſed, is diligently to be enquired and ſet down.

### *Dr.* Meverel's *anſwers to the foregoing queſtions, concerning the variation of metals and minerals.*

1. For tinctures, there are none that I know, but that rich variety which ſprings from mixture of metals with metals, or imperfect minerals.

2. The imperfect metals are ſubject to ruſt, all of them except mercury, which is made into vermilion by ſolution, or calcination. The reſt are ruſted by any ſalt, ſour, or acid water. Lead into a white body called *ceruſſa*. Iron into a pale red called *ferrugo*. Copper is turned into green, named *aerugo*, *aes viride*. Tin into white: But this is not in uſe, neither hath it obtained a name.

THE ſcriptures mention the ruſt of gold, but that's in regard of the alloy.

3. CALCINATION. All metals may be calcined by ſtrong waters, or by admixtion of ſalt, ſulphur, and mercury. The imperfect metals may be calcined by continuance of ſimple fire; iron thus calcined is called *crocus martis*.

AND this is their beſt way. Gold and ſilver are beſt calcined by mercury. Their colour is gray. Lead calcined is very red. Copper duſky red.

4. METALS are ſublimed by joining them with mercury or ſalts. As ſilver with mercury, gold with ſal armoniac, mercury with vitriol.

5. PRECIPITATION is, when any metal being diſſolved into a ſtrong water, is beaten down into a powder by ſalt water. The chiefeſt in this kind is oil of tartar.

6. AMALGAMATION, is the joining, or mixing of mercury with any other of the metals. The manner is this in gold, the reſt are anſwerable: take ſix parts of mercury, make them hot in a crucible, and pour them to one part of gold made red hot in another crucible, ſtir theſe well together that they may incorporate; which done, caſt the maſs into cold water and waſh it. This is called the amalgama of gold.

7. FOR vitrification. All the imperfect metals may be turned by ſtrong fire into glaſs, except mercury; iron into green; lead into yellow; braſs into blue; tin into pale yellow. For gold and ſilver, I have not known them vitrified, except joined with antimony. Theſe glaſſy bodies may be reduced into the form of mineral bodies.

8. DISSOLUTION. All metals without exception may be diſſolved.

1. IRON may be diſſolved by any tart, ſalt, or vitriolated water; yea, by common water, if it be firſt calcined with ſulphur. It diſſolves in *aqua fortis* with great ebullition and heat, into a red liquor, ſo red as blood.

2. LEAD is fitteſt diſſolved in vinegar, into a pale yellow, making the vinegar very ſweet.

3. TIN is beſt diſſolved with diſtilled ſalt-water. It retains the colour of the *menſtruum*.

4. COPPER diſſolves as iron doth, in the ſame liquor into a blue.

5. SILVER hath its proper *menſtruum*, which is *aqua fortis*. The colour is green, with great heat and ebullition.

6. GOLD is diſſolved with *aqua regia*, into a yellow liquor, with little heat or ebullition.

7. MERCURY is diſſolved with much heat and boiling, into the ſame liquors which gold and ſilver are. It alters not the colour of the *menſtruum*.

NOTE. Strong waters may be charged with half their weight of fixed metals, and equal of mercury; if the workman be ſkilful.

9. SPROUTING. This is an accident of diſſolution. For if the *menſtruum* be overcharged, then within ſhort time the metals will ſhoot into certain cryſtals.

10. FOR induration, or mollification, they depend upon the quantity of fixed mercury and ſulphur. I have obſerved little of them, neither of toughneſs nor bitterneſs.

11. THE degrees of fixation and volatility I acknowledge, except the two utmoſt, which never were obſerved.

12. THE queſtion of tranſmutation is very doubtful. Wherefore I refer your honour to the fourth tome of *Theatrum chymicum*: and there, to that

tract

tract which is entituled *diſquiſitio Heliana*; where you ſhall find full ſatisfaction.

*Inquiries concerning metals and minerals. The fourth letter of the croſs-row, touching reſtitution.*

FIRST, therefore it is to be inquired in the negative, what bodies will never return, either by their extreme fixings, as in ſome vitrifications, or by extreme volatility.

IT is alſo to be inquired of the two means of reduction; and firſt by the fire, which is but by congregation of homogeneal parts.

THE ſecond is, by drawing them down by ſome body that hath conſent with them. As iron draweth down copper in water; gold draweth quick-ſilver in vapour; whatſoever is of this kind, is very diligently to be inquired.

ALSO it is to be inquired what time, or age, will reduce without help of fire or body.

ALSO it is to be inquired what gives impediment to union or reſtitution, which is ſometimes called mortification; as when quick-ſilver is mortified with turpentine, ſpittle, or butter.

LASTLY, it is to be inquired how the metal reſtored, differeth in any thing from the metal rare: as whether it become not more churliſh, altered in colour, or the like.

*Dr.* Meverel's *anſwers touching the reſtitutions of metals and minerals.*

REDUCTION is chiefly effected by fire, wherein if they ſtand and nele, the imperfect metals vapour away, and ſo do all manner of ſalts which ſeparated them *in minimas partes* before.

REDUCTION is ſingularly holpen, by joining ſtore of metal of the ſame nature with it in the melting.

METALS reduced are ſomewhat churliſh, but not altered in colour.

*The lord* Verulam's *inquiſition concerning the verſions, tranſmutations, multiplications, and effections of bodies.*

EARTH by fire is turned into brick, which is of the nature of a ſtone, and ſerveth for building as ſtone doth: and the like of tile. *Quaere* the manner.

NAPHTHA, which was the bituminous mortar uſed in the walls of *Babylon*, grows to an entire and very hard matter like a ſtone.

IN clay countries, where there is pebble and gravel, you ſhall find great ſtones, where you may ſee the pebbles or gravel, and between them a ſubſtance of ſtone as hard or harder than the pebble it ſelf.

THERE are ſome ſprings of water, wherein if you put wood, it will turn into the nature of ſtone: ſo as that within the water ſhall be ſtone, and that above the water continue wood.

THE ſlime about the reins and bladder in man's body, turns into ſtone: and ſtone is likewiſe found often in the gall; and ſometimes, though rarely, *in vena porta*.

QUAERE what time the ſubſtance of earth in quarries, aſketh to be turned into ſtone?

WATER, as it ſeems, turneth into cryſtal, as is ſeen in divers caves, where the cryſtal hangs *in ſtillicidiis*.

TRY

TRY wood, or the ſtalk of herbs, buried in quick-ſilver, whether it will not grow hard and ſtony?

THEY ſpeak of a ſtone engendred in a toad's head.

THERE was a gentleman, digging in his moat, found an egg turned into ſtone, the white and the yolk keeping their colour, and the ſhell gliſtering like a ſtone cut with corners.

TRY ſome things put into the bottom of a well; as wood, or ſome ſoft ſubſtance: but let it not touch the water, becauſe it may not putrefy.

THEY ſpeak, that the white of an egg, with lying long in the ſun, will turn ſtone.

MUD in water turns into ſhells of fiſhes, as in horſe muſcles, in freſh ponds, old and overgrown. And the ſubſtance is a wondrous fine ſubſtance, light and ſhining.

*A ſpeech touching the recovering of drowned mineral works, prepared for the parliament (as Mr.* Buſhel *affirmed) by the viſcount of* St. Albans, *then lord high chancellor of* England (*a*).

*My lords and gentlemen,*

THE king, my royal maſter, was lately (graciouſly) pleaſed to move ſome diſcourſe to me concerning Mr. *Sutton*'s hoſpital, and ſuch like worthy foundations of memorable piety: which humbly ſeconded by my ſelf, drew his majeſty into a ſerious conſideration of the mineral treaſures of his own territories, and the practical diſcoveries of them by way of my philoſophical theory: which he then ſo well reſented, that, afterwards, upon a mature digeſtion of my whole deſign, he commanded me to let your lordſhips underſtand, how great an inclination he hath to further ſo hopeful a work, for the honour of his dominions, as the moſt probable means to relieve all the poor thereof, without any other ſtock or benevolence, than that which divine bounty ſhould confer on their own induſtries and honeſt labours, in recovering all ſuch drowned mineral works, as have been, or ſhall be therefore deſerted.

AND, my lords, all that is now deſired of his majeſty and your lordſhips, is no more than a gracious act of this preſent parliament to authorize them herein, adding a mercy to a munificence, which is, the perſons of ſuch ſtrong and able petty-felons, who, in true penitence for their crimes, ſhall implore his majeſty's mercy and permiſſion to expiate their offences, by their aſſiduous labours in ſo innocent and hopeful a work.

FOR, by this unchangeable way (my lords) have I propoſed to erect the academical fabrick of this iſland's *Solomon*'s houſe, modell'd in my new *Atlantis*. And I can hope (my lords) that my midnight ſtudies, to make our countries flouriſh and outvy *European* neighbours in myſterious and beneficent arts, have not ſo ingratefully affected your noble intellects, that you will delay or reſiſt his majeſty's deſires, and my humble petition in this benevolent, yea, magnificent affair; ſince your honourable poſterities may be enriched thereby, and my ends are only to make the world my heir, and the learned fathers of my *Solomon*'s houſe, the ſucceſſive and ſworn truſtees in the diſpenſation of this great ſervice, for God's glory, my prince's magnificence, this parliament's honour, our countrey's general good, and the propagation of my own memory.

(*a*) See Mr. *Bee*'s extract, p. 18, 19.

AND

And I may assure your lordships, that all my proposals in order to this great architype, seemed so rational and feasible to my royal sovereign our christian *Solomon*, that I thereby prevailed with his majesty to call this honourable parliament, to confirm and impower me in my own way of mining, by an act of the same, after his majesty's more weighty affairs were considered in your wisdoms; both which he desires your lordships, and you gentlemen that are chosen as the patriots of your respective countries, to take speedy care of: which done, I shall not then doubt the happy issue of my undertakings in this design, whereby concealed treasures, which now seem utterly lost to mankind, shall be confined to so universal a piety, and brought into use by the industry of converted penitents, whose wretched carcases the impartial laws have, or shall dedicate, as untimely feasts, to the worms of the earth, in whose womb those deserted mineral riches must ever lie buried as lost abortments, unless those be made the active midwives to deliver them. For, my lords, I humbly conceive them to be the fittest of all men to effect this great work, for the ends and causes which I have before expressed.

All which, my lords, I humbly refer to your grave and solid judgments to conclude of, together with such other assistances to this frame, as your own oraculous wisdom shall intimate for the magnifying our Creator in his inscrutable providence, and admirable works of nature.

*Certain experiments made by the lord* Bacon *about weight in air and water.*

A new sovereign of equal weight in the air to the piece in brass, overweigheth in the water nine grains: in three sovereigns the difference in the water is but twenty four grains.

The same sovereign overweigheth an equal weight of lead, four grains in the water, in brass grains for gold: in three sovereigns about eleven grains.

The same sovereign overweigheth an equal weight of stones in the air, at least sixty five grains in the water: the grains being for the weight of gold, in brass metal.

A glass filled with water weighing, in *Troy* weights, thirteen ounces and five drams, the glass and the water together weigheth severally, *viz.* the water nine ounces and a half, and the glass four ounces and a dram.

A bladder weighing two ounces seven drams and a half, a pebble laid upon the top of the bladder makes three ounces six drams and a half, the stone weigheth seven drams.

The bladder (as above) blown, and the same fallen, weigheth equal.

A sponge dry weigheth one ounce, twenty six grains: the same sponge being wet, weigheth fourteen ounces, six drams and three quarters; the water weigheth in several eleven ounces, one dram and a half, and the sponge three ounces and a half, and three quarters of a dram. First time.

The sponge and water together weigh fifteen ounces and seven drams: in several, the water weigheth eleven ounces and seven drams, and the sponge three ounces seven drams and a half. Second time.

Three sovereigns made equal to a weight in silver in the air, differ in the water.

For false weights, one beam long, the other thick.

The stick and thread weigh half a dram, and twenty grains, being laid in the balance.

The stick tied to reach within half an inch of the end of the beam, and so

ſo much from the tongue, weigheth twenty eight grains; the difference is twenty two grains.

The ſame ſtick being tied to hang over the end of the beam an inch and a half, weigheth half a dram and twenty four grains, exceeding the weight of the ſaid ſtick in the balance by four grains.

The ſame ſtick being hanged down beneath the thread, as near the tongue as is poſſible, weigheth only eight grains.

Two weights of gold being made equal in the air, and weighing ſeverally ſeven drams; the one balance being put into the water, and the other hanging in the air, the balance in the water weigheth only five drams and three grains, and abateth of the weight in the air one dram and a half, and twenty ſeven grains.

The ſame trial being made the ſecond time, and more truly and exactly betwixt gold and gold, weighing ſeverally (as above) and making a juſt and equal weight in the air, the one balance being put into the water the depth of five inches, and the other hanging in the air, the balance in the water weigheth only four drams, and fifty five grains, and abateth of the weight in the air two drams, and five grains.

The trial being made betwixt lead and lead, weighing ſeverally ſeven drams in the air, the balance in the water weigheth only four drams, and forty one grains, and abateth of the weight in the air two drams, and nineteen grains; the balance kept the ſame depth in the water as aboveſaid.

The trial being made betwixt ſilver and ſilver, weighing ſeverally ſeven drams in the air, the balance in the water weigheth only four drams, and twenty five grains. So it abateth two drams, and thirty five grains; the ſame depth in the water obſerved.

In iron and iron, weighing ſeverally each balance in the air ſeven drams, the balance in the water weigheth only four drams, and eighteen grains; and abateth of the weight in the air two drams, and forty two grains; the depth obſerve as above.

In ſtone and ſtone, the ſame weight of ſeven drams equally in the air, the balance in the water weigheth only two drams, and twenty two grains; and abateth of the weight in the air four drams, and thirty eight grains; the depth as above.

In braſs and braſs, the ſame weight of ſeven drams in each balance, equal in the air, the balance in the water weigheth only four drams, and twenty two grains; and abateth in the water two drams, and thirty eight grains; the depth obſerved.

The two balances being weighed in the air and water, the balance in the air over-weigheth the other in the water two drams, and twenty eight grains; the depth in the water as aforeſaid.

It is a profitable experiment which ſheweth the weights of ſeveral bodies in compariſon with water. It is of uſe in lading of ſhips, and other bottoms, and may help to ſhew what burthen in the ſeveral kinds they will bear.

*Certain ſudden thoughts of the lord* Bacon's, *ſet down by him under the title of experiments for profit.*

Muck of leaves: muck of river, earth, and chalk: muck of earth cloſed, both for ſalt-petre and muck: ſetting of wheat and peaſe; mending of crops by ſteeping of ſeeds: making peaſe, cherries, and ſtrawberries come early: ſtrengthening of earth for often returns of radiſhes, parſnips, turnips, *&c.* making great roots of onions, radiſhes, and other eſculent roots: ſowing of

ſeeds

ſeeds of trefoil: ſetting of woad: ſetting of tobacco, and taking away the rawns: grafting upon boughs of old trees: making of a haſty coppice: planting of oſiers in wet grounds: making of candles to laſt long: building of chimneys, furnaces, and ovens, to give heat with leſs wood: fixing of log-wood: other means to make yellow and green fixed: conſerving of oranges, lemons, citrons, pomegranates, *&c.* all ſummer: recovering of pearl, coral, turcoiſe colour, by a conſervatory of ſnow: ſowing of fenel: brewing with hay, haws, trefoil, broom, hips, bramble-berries, woodbines, wild thyme, inſtead of hops, thiſtles: multiplying and dreſſing artichokes.

*Certain experiments of the lord* Bacon's, *about the commixture of liquors only, not ſolids, without heat or agitation, but only by ſimple compoſition and ſettling.*

Spirit of wine mingled with common water, although it be much lighter than oil, yet ſo as if the firſt fall be broken, by means of a ſop, or otherwiſe, it ſtayeth above; and if it be once mingled, it ſevereth not again, as oil doth. Tried with water coloured with ſaffron.

Spirit of wine mingled with common water, hath a kind of clouding, and motion ſhewing no ready commixture. Tried with ſaffron.

A dram of gold diſſolved in *aqua regis*, with a dram of copper in *aqua fortis* commixed, gave a green colour, but no viſible motion in the parts. Note, that the diſſolution of the gold, was twelve parts water, to one part body: and of the copper was ſix parts water, to one part body.

Oil of almonds commixed with ſpirit of wine, ſevereth, and the ſpirit of wine remaineth on the top, and the oil in the bottom.

Gold diſſolved commixed with ſpirit of wine, a dram of each, doth commix, and no other apparent alteration.

Quick-ſilver diſſolved with gold diſſolved, a dram of each, doth turn to a mouldy liquor, black, and like ſmith's water.

Note; the diſſolution of the gold was twelve parts water *ut ſupra*, and one part metal: that of water was two parts, and one part metal.

Spirit of wine and quick-ſilver commixed, a dram of each, at the firſt ſhewed a white milky ſubſtance at the top, but ſoon after mingled.

Oil of vitriol commixed with oil of cloves, a dram of each, turneth into a red dark colour; and a ſubſtance thick almoſt like pitch: and upon the firſt motion gathereth an extream heat, not to be endured by touch.

Diſſolution of gold, and oil of vitriol commixed, a dram of each, gathereth a great heat at the firſt, and darkneth the gold, and maketh a thick yellow.

Spirit of wine, and oil of vitriol, a dram of each, hardly mingle; the oil of vitriol going to the bottom, and the ſpirit of wine lying above in a milky ſubſtance. It gathereth alſo a great heat, and a ſweetneſs in the taſte.

Oil of vitriol, and diſſolution of quick-ſilver, a dram of each, maketh an extream ſtrife, and caſteth up a very groſs fume, and after caſteth down a white kind of curds, or ſands; and on the top a ſlimiſh ſubſtance, and gathereth a great heat.

Oil of ſulphur, and oil of cloves commixed, a dram of each, turn into a thick and red coloured ſubſtance; but no ſuch heat as appear'd in the commixture with the oil of vitriol.

Oil of *petroleum*, and ſpirit of wine, a dram of each, intermingle otherwiſe than by agitation, as wine and water do; and the *petroleum* remaineth on the top.

OIL of vitriol and *petroleum*, a dram of each, turn into a mouldy ſubſtance, and gathereth ſome warmth; there reſiding a black cloud in the bottom, and a monſtrous thick oil on the top.

SPIRIT of wine, and red wine vinegar, one ounce of each, at the firſt fall, one of them remaineth above, but by agitation they mingle.

OIL of vitriol, and oil of almonds, one ounce of each, mingle not; but the oil of almonds remaineth above.

SPIRIT of wine and vinegar, an ounce of each, commixed, do mingle, without any apparent ſeparation, which might be in reſpect of the colour.

DISSOLUTION of iron, and oil of vitriol, a dram of each, do firſt put a milky ſubſtance into the bottom, and after incorporate into a mouldy ſubſtance.

SPIRIT of wine commixed with milk, a third part ſpirit of wine, and two parts milk, coagulateth little, but mingleth; and the ſpirit ſwims not above.

MILK and oil of almonds mingled, in equal portions, do hardly incorporate, but the oil cometh above, the milk being poured in laſt; and the milk appeareth in ſome drops or bubbles.

MILK one ounce, oil of vitriol a ſcruple, doth coagulate; the milk at the bottom, where the vitriol goeth.

DISSOLUTION of gum tragacanth, and oil of ſweet almonds, do not commingle, the oil remaining on the top till they be ſtirred, and make the mucilage ſomewhat more liquid.

DISSOLUTION of gum tragacanth one ounce and a half, with half an ounce of ſpirit of wine, being commixed by agitation, make the mucilage more thick.

THE white of an egg with ſpirit of wine, doth bake the egg into clots as if it began to poch.

ONE ounce of blood, one ounce of milk, do eaſily incorporate.

SPIRIT of wine doth curdle the blood.

ONE ounce of whey unclarified, one ounce of oil of vitriol, make no apparent alteration.

ONE ounce of blood, one ounce of oil of almonds, incorporate not, but the oil ſwims above.

THREE quarters of an ounce of wax being diſſolved upon the fire, and one ounce of oil of almonds put together and ſtirred, do not ſo incorporate, but that when it is cold, the wax gathereth and ſwims upon the top of the oil.

ONE ounce of oil of almonds caſt into an ounce of ſugar ſeething, ſever preſently, the ſugar ſhooting towards the bottom.

### *A catalogue of bodies, attractive and not attractive, together with experimental obſervations about attraction.*

THESE following bodies draw: amber, jet, diamond, ſapphire, carbuncle, iris, the gem opale, amethyſt, *briſtollina*, cryſtal, clear glaſs, glaſs of antimony, divers flowers from mines, ſulphur, maſtick, hard ſealing-wax, the harder roſin, arſenick.

THESE following bodies do not draw: ſmaragd, *achates*, *corneolus*, pearl, *jaſpis*, *chalcedonius*, alabaſter, porphyry, coral, marble, touchſtone, *haematites*, or blood-ſtone; *ſmyris*, ivory, bones, ebon-tree, cedar, cypreſs, pitch, ſofter roſin, camphire, *galbanum*, ammoniack, ſtorax, benjoin, load-ſtone, *aſphaltum* (*a*).

(*a*) The drawing of iron excepted.

THESE bodies, gold, ſilver, braſs, iron, draw not, though never ſo finely poliſhed.

IN winter, if the air be ſharp and clear, *ſal gemmeum*, roch alum, and *lapis ſpecularis*, will draw.

THESE following bodies are apt to be drawn, if the maſs of them be ſmall: chaff, woods, leaves, ſtones, all metals leaved, and in the mine; earth, water, oil.

SI fiat verſorium ex metallo aliquo, more indicis magnetici, & fini alteri apponatur ſuccinum, leniter fricatum, verſorium convertit ſe.

SUCCINUM calefactum ab igne, ſive tepeat, ſive ferveat, ſive inflammetur, non trahit.

BACILLUM ferreum candens, flamma, candela ardens, carbo ignitus, admota feſtucis aut verſoriis, non trahunt.

SUCCINUM in majore mole, ſi fuerit politum, allicit, licet non fricatum; ſi in minore, aut impurius, ſine frictione non trahit.

CRYSTALLUS, lapis ſpecularis, vitrum, electrica caetera, ſi urantur, aut torreantur, non trahunt.

PIX: reſina mollior: benjoin: aſphaltum, camphora: galbanum, ammoniacum: ſtorax: aſſa: haec coelo calidiore neutiquam prorſus trahunt; at tempore frigidiore obſcure & infirme trahunt.

VAPIDUS aër ſuccino, &c. afflatus, vel ab ore, vel ab aëre humidiore, virtutem trahendi ſuffocat.

SI charta aut linteum interponatur inter ſuccinum & paleam, non fit motus aut attractio.

SUCCINUM aut electrica calefacta ex radiis ſolis, non expergefiunt ad trahendum, ſicut ex frictione.

SUCCINUM fricatum, & radiis ſolis expoſitum diutius vires trahendi retinet, nec tam cito eas deponit ac ſi in umbra poſitum eſſet.

FERVOR ex ſpeculo comburente ſuccino, &c. conciliatus, non juvat ad trahendum.

SULPHUR accenſum, & cera dura inflammata, non trahunt.

SUCCINUM cum citiſſime a frictione, feſtucae vel verſorio apponitur, optime trahit.

VIRTUS electrica viget in retentione ad tempus, non minus quam in attractione prima.

FLAMMA appoſito ſuccino intra orbem activitatis non trahitur.

GUTTA aquae admoto ſuccino trahitur in conum. Electrica, ſi durius affricentur, impeditur attractio.

QUAE aegre alliciunt in claro coelo, in craſſo non movent.

AQUA impoſita ſuccino virtutem trahendi ſuffocat, licet ipſam aquam trahat.

SARCA ita ſuccino circundatum, ut tangat, attractione tollit; ſed interpoſitum ut non tangat, non omnino tollit.

OLEUM ſuccino appoſitum motum non impedit; nec ſuccinum digito oleo madefacto fricatum, vires trahendi perdit.

FIRMIUS provocant, & diutius retinent ſuccinum, gagates, & hujuſmodi, etiam minore cum frictione: adamas, cryſtallum, vitrum, diutius teri debent, ut manifeſto incaleſcant antequam trahant.

QUAE flammae approximant, licet propinqua diſtantia, a ſuccino non trahuntur.

FUMUM extincta lucerna ſuccinum, &c. trahit. Fumus ubi exit & craſſus eſt, fortius trahit ſuccinum; cum aſcenderit, & rarior fit, debilius. Corpus ab electricis attractum non manifeſto alteratur, ſed tantum incumbit.

# MEDICAL REMAINS.

*Grains of youth.*

TAKE of nitre four grains, of ambergriſe three grains, of orrice-powder two grains, of white poppy-ſeed the fourth part of a grain, of ſaffron half a grain, with water of orange-flowers, and a little tragacanth; make them into ſmall grains, four in number. To be taken at four a-clock, or going to bed.

*Preſerving ointments.*

TAKE of deer's-ſuet one ounce, of myrrh ſix grains, of ſaffron five grains, of bay-ſalt twelve grains, of *Canary* wine of two years old, a ſpoonful and a half. Spread it on the inſide of your ſhirt, and let it dry, and then put it on.

*A purge familiar for opening the liver.*

TAKE rhubarb two drams, agarick trochiſcat one dram and a half, ſteep them in claret wine burnt with mace; take of wormwood one dram, ſteep it with the reſt, and make a maſs of pills, with *ſyrup. acetoſ. ſimplex.* But drink an opening broth before it, with ſuccory, fenel, and ſmallage roots, and a little of an onion.

*Wine for the ſpirits.*

TAKE gold perfectly refined three ounces, quench it ſix or ſeven times in good claret wine; add of nitre ſix grains for two draughts: add of ſaffron prepared three grains, of ambergriſe four grains, paſs it through an hippocraſs bag, wherein there is a dram of cinnamon groſs beaten, or, to avoid the dimming of the colour, of ginger. Take two ſpoonfuls of this to a draught of freſh claret wine.

*The preparing of ſaffron.*

TAKE ſix grains of ſaffron, ſteep'd in half parts of wine and roſe-water, and a quarter part vinegar; then dry it in the ſun.

*Wine againſt adverſe melancholy, preſerving the ſenſes and the reaſon.*

TAKE the roots of bugloſs well ſcraped and cleanſed from their inner pith, and cut them into ſmall ſlices; ſteep them in wine of gold extinguiſhed *ut ſupra*, and add of nitre three grains, and drink it *ut ſupra*, mixed with freſh wine: the roots muſt not continue ſteeped above a quarter of an hour; and they muſt be changed thrice.

*Breakfaſt*

*Breakfaſt preſervative againſt the gout and rheums.*

To take once in the month at leaſt, and for two days together, one grain of *caſtorei* in my ordinary broth.

*The preparation of garlick.*

TAKE garlick four ounces, boil it upon a ſoft fire in claret wine, for half an hour. Take it out, and ſteep it in vinegar; whereto add two drams of cloves, then take it forth, and keep it in a glaſs for uſe.

*The artificial preparation of damask roſes for ſmell.*

TAKE roſes, pull their leaves, then dry them in a clear day in the hot ſun; then their ſmell will be as gone. Then cram them into an earthen bottle, very dry and ſweet, and ſtop it very cloſe; they will remain in ſmell and colour both freſher, than thoſe that are otherwiſe dried. Note, the firſt drying, and cloſe keeping upon it, preventeth all putrefaction, and the ſecond ſpirit cometh forth, made of the remaining moiſture not diſſipated.

*A reſtorative drink.*

TAKE of *Indian* maiz half a pound, grind it not too ſmall, but to the fineneſs of ordinary meal, and then bolt and ſearce it, that all the huſky part may be taken away. Take of *eryngium* roots three ounces, of dates as much, of *enula* two drams, of mace three drams, and brew them with ten ſhilling beer to the quantity of four gallons: and this do, either by decocting them in a pottle of wort, to be after mingled with the beer, being new tapped, or otherwiſe infuſe it in the new beer in a bag. Uſe this familiarly at meals.

*Againſt the waſte of the body by heat.*

TAKE ſweet pomegranates, and ſtrain them lightly, not preſſing the kernel, into a glaſs; where put ſome little of the peel of a citron, and two or three cloves, and three grains of amber-griſe, and a pretty deal of fine ſugar. It is to be drunk every morning whilſt pomegranates laſt.

*Methuſalem water. Againſt all aſperity and torrefaction of inward parts, and all aduſtion of the blood, and generally againſt the dryneſs of age.*

TAKE creviſes very new, *q. ſ.* boil them well in claret wine; of them take only the ſhells, and rub them very clean, eſpecially on the inſide, that they may be thoroughly cleanſed from the meat. Then waſh them three or four times in freſh claret wine, heated: ſtill changing the wine, till all the fiſh-taſte be quite taken away. But in the wine wherein they are waſhed, ſteep ſome tops of green roſemary; then dry the pure ſhell throughly, and bring them to an exquiſite powder. Of this powder take three drams. Take alſo pearl, and ſteep them in vinegar twelve hours, and dry off the vinegar; of this powder alſo three drams. Then put the ſhell powder and pearl powder together, and add to them of ginger one ſcruple, and of white poppy ſeed half a ſcruple, and ſteep them in ſpirit of wine (wherein ſix grains of ſaffron have been diſſolved) ſeven hours. Then upon a gentle heat, vapour away all the ſpirit of wine, and dry the powder againſt the ſun without fire. Add to it of nitre one dram, of amber-griſe one ſcruple and a half; and ſo keep this powder for uſe in a clean glaſs.

Then

Then take a pottle of milk, and ſlice in it of freſh cucumbers, the inner pith only (the rind being pared off) four ounces, and draw forth a water by diſtillation. Take of claret wine a pint, and quench gold in it four times.

Of the wine, and of the water of milk, take of each three ounces, of the powder one ſcruple, and drink it in the morning; ſtir up the powder when you drink, and walk upon it.

*A catalogue of aſtringents, openers, and cordials, inſtrumental to health.*

ASTRINGENTS.

RED roſe, black-berry, myrtle, plantane, flower of pomegranate, mint, aloes well waſhed, myrobalanes, ſloes, *agreſtia fraga*, maſtich, myrrh, ſaffron, leaves of roſemary, rhubarb received by infuſion, cloves, ſervice-berries, *corna*, wormwood, bole armeniack, ſealed earth, cinquefoil, tincture of ſteel, *ſanguis draconis*, coral, amber, quinces, ſpikenard, galls, alume, blood-ſtone, mummy, *amomum*, galangal, cypreſs, ivy, *pſyllum*, houſleek, ſallow, mullein, vine, oak-leaves, *lignum aloes*, red ſanders, mulberry, medlars, flowers of peach trees, pomegranates, pears, palmule, pith of kernels, purſlain, *acacia*, *laudanum*, *tragacanth*, *thus olibani*, comfrey, ſhepherd's-purſe, *polygonium*.

*Aſtringents (both hot and cold) which corroborate the parts, and which confirm and refreſh ſuch of them as are looſe or languiſhing.*

ROSEMARY, mint, eſpecially with vinegar, cloves, cinamon, cardamom, lign-aloes, roſe, myrtle, red ſanders, *cotonea*, red wine, chalybeat wine, five-finger graſs, plantane, apples of cypreſs, berberries, *fraga*, ſervice-berries, cornels, ribes, ſour pears, rambeſia.

*Aſtringents ſtyptic, which by their ſtyptic virtue may ſtay fluxes.*

SLOES, *acacia*, rind of pomegranates infuſed, at leaſt three hours, the ſtyptic virtue not coming forth in leſſer time. Alume, galls, juice of ſallow, ſyrup of unripe quinces, *balauſtia*, the whites of eggs boiled hard in vinegar.

*Aſtringents, which by their cold and earthy nature, may ſtay the motion of the humours tending to a flux.*

SEALED earth, *ſanguis draconis*, coral, pearls, the ſhell of the fiſh *dactylus*.

*Aſtringents, which by the thickneſs of their ſubſtance, ſtuff as it were the thin humours, and thereby ſtay fluxes.*

RICE, beans, millet, cauls, dry cheeſe, freſh goats milk.

*Aſtringents, which by virtue of their glutinous ſubſtance, reſtrain a flux, and ſtrengthen the looſer parts.*

KARABE (*a*), maſtich, *ſpodium*, hartſhorn, frankincenſe, dried bulls piſtle, gum tragacanth.

*Aſtringents purgative, which having by their purgative, or expulſive power, thruſt out the humours, leave behind them aſtrictive virtue.*

RHUBARB, eſpecially that which is toaſted againſt the fire; myrobalanes, tartar, tamarinds, (an *Indian* fruit like green damaſcenes.)

(*a*) Perhaps he meant the fruit of *Karobe*.

*Aſtrin-*

*Aſtringents which do very much ſuck and dry up the humours, and thereby ſtay fluxes.*

Rust of iron, *crocus martis*, aſhes of ſpices.

*Aſtringents, which by their nature do dull the ſpirits, and lay aſleep the expulſive virtue, and take away the acrimony of all humours.*

Laudanum, mithridate, *diaſcordium*, *diacodium*.

*Aſtringents, which by cheriſhing the ſtrength of the parts, do comfort and confirm their retentive power.*

A ſtomacher of ſcarlet cloth: whelps, or young healthy boys, applied to the ſtomach: hippocratic wines, ſo they be made of auſtere materials.

### Openers.

Succory, endive, betony, liverwort, *petroſelinum*, ſmallage, *aſparagus*, roots of graſs, dodder, tamariſk, *juncus odoratus*, *lacca*, *cupparus*, wormwood, *chamaepitys*, *fumaria*, ſcurvy-graſs, eringo, nettle, *ireos*, elder, hyſſop, *ariſtolochia*, gentian, *coſtus*, fenel-root, maiden-hair, harts-tongue, daffodilly, aſarum, ſarſaparilla, ſaſſafras, acorns, *abretonum*, aloes, agaric, rhubarb infuſed, onions, garlick, bother, *ſquilla*, ſow-bread, *Indian* nard, *Celtic* nard, bark of laurel tree, bitter almonds, holy thiſtle, camomile, gun-powder, ſows (*millepedes*) ammoniac, man's urine, rue, park leaves (*vitex*) centaury, lupines, *chamaedrys*, *coſtum*, *ammios*, biſtort, camphire, *daucus* ſeed, *Indian* balſam, *ſcordium*, ſweet cane, galingal, agrimony.

### Cordials.

Flowers of baſil royal, *flores caryophyllati*, flowers of bugloſs and borage, rind of citron, orange flowers, roſemary, and its flowers, ſaffron, muſk, amber, *folium*, (*i. e. nardi folium*) balm-gentle, pimpernel, gems, gold, generous wines, fragrant apples, roſe, *roſa moſchata*, cloves, lign-aloes, mace, cinamon, nutmeg, cardamom, galingal, vinegar, kermes berry, *herba moſchata*, betony, white ſanders, camphire, flowers of heliotrope, peny-royal, *ſcordium*, *opium* corrected, white pepper, *naſturtium*, white and red bean, *caſtum dulce*, *dactylus*, pine, fig, egg ſhell, *vinum malvaticum*, ginger, kidneys, oiſters, creviſes, (or river crabs) ſeed of nettle, oil of ſweet almonds, *ſeſaminum oleum*, *aſparagus*, bulbous roots, onions, garlick, *eruca*, *daucus* ſeed, eringo, *ſiler montanus*, the ſmell of muſk, *cynethi odor*, caraway ſeed, flower of puls, aniſeed, pellitory, anointing of the teſticles with oil of elder, in which pellitory hath been boil'd, cloves with goats milk, *olibanum*.

*An extract by the lord* Bacon, *for his own uſe, out of the book of the prolongation of life, together with ſome new advices in order to health.*

1. Once in the week, or at leaſt in the fortnight, to take the water of mithridate diſtilled, with three parts to one, or ſtrawberry water to allay it; and ſome grains of nitre and ſaffron, in the morning between ſleeps.

2. To continue my broth with nitre; but to interchange it every other two days, with the juice of pomegranates expreſſed, with a little cloves, and rind of citron.

3. To

3. To order the taking of the maceration (*a*), as followeth.

To add to the maceration ſix grains of *cremor tartari*, and as much *enula*.

To add to the oxymel ſome infuſion of fenel roots in the vinegar, and four grains of angelica ſeed, and juice of lemons, a third part to the vinegar.

To take it not ſo immediately before ſupper; and to have the broth ſpecially made with barley, roſemary, thyme, and creſſes.

SOMETIMES to add to the maceration three grains of tartar, and two of *enula*, to cut the more heavy and viſcous humours; leſt rhubarb work only upon the lighteſt.

To take ſometimes the oxymel before it, and ſometimes the *Spaniſh* honey ſimple.

4. To take once in the month at leaſt, and for two days together, a grain and a half of caſtor in my broth, and breakfaſt.

5. A cooling clyſter to be uſed once a month, after the working of the maceration is ſettled.

TAKE of barley water, in which the roots of bugloſs are boiled, three ounces, with two drams of red ſanders, and two ounces of raiſins of the ſun, and one ounce of dactyles, and an ounce and a half of fat caricks; let it be ſtrained, and add to it an ounce and a half of ſyrup of violets: let a clyſter be made. Let this be taken (with veal) in the aforeſaid decoction.

6. To take every morning the fume of lign-aloes, roſemary and bays dried, which I uſe; but once in a week to add a little tobacco, without otherwiſe taking it in a pipe.

7. To appoint every day an hour, *ad affectus intentionales & ſanos. Qu. de particulari.*

8. To remember maſticatories for the mouth.

9. AND orange-flower water to be ſmelt to, or ſnuffed up.

10. IN the third hour, after the ſun is riſen, to take in air from ſome high and open place, with a ventilation of *roſae moſchatae*, and freſh violets; and to ſtir the earth, with infuſion of wine and mint.

11. To uſe ale with a little *enula campana*, *carduus*, germander, ſage, angelica ſeed, creſſes of a middle age, to beget a robuſt heat.

12. MITHRIDATE thrice a year.

13. A bit of bread dipt *in vino odorato*, with ſyrup of dry roſes, and a little amber, at going to bed.

14. NEVER to keep the body in the ſame poſture above half an hour at a time.

15. FOUR precepts. To break off cuſtom. To ſhake off ſpirits ill diſpoſed. To meditate on youth. To do nothing againſt a man's genius.

16. SYRUP of quinces for the mouth of the ſtomach. Enquire concerning other things uſeful in that kind.

17. To uſe once during ſupper time, wine in which gold is quenched.

18. To uſe anointing in the morning lightly with oil of almonds, with ſalt and ſaffron, and a gentle rubbing.

19. ALE of the ſecond infuſion of the vine of oak.

20. METHUSALEM water, of pearls and ſhells, of crabs, and a little chalk.

21. ALE of raiſins, dactyles, potatoes, piſtachios, honey, tragacanth, maſtick.

22. WINE with ſwines fleſh, or harts fleſh.

23. To drink the firſt cup at ſupper hot, and half an hour before ſupper ſomething hot and aromatis'd.

(*a*) *Viz.* Of rhubarb infuſed into a draught of white-wine and beer, mingled together, for the ſpace of half an hour, once in ſix or ſeven days. See the lord *Bacon*'s life by Dr. *Rawley*, towards the end.

24. CHA-

24. CHALYBEATS, four times a year.

25. *Pilulae ex tribus*, once in two months, but after the maſs has been macerated in oil of almonds.

26. HEROIC deſires.

27. BATHING of the feet once in a month, with lye *ex ſale nigro*, camomile, ſweet marjoram, fenel, ſage, and a little *aqua vitae*.

28. TO provide always an apt breakfaſt.

29. TO beat the fleſh before roaſting of it.

30. MACERATIONS in pickles.

31. AGITATION of beer by ropes, or in wheel-barrows.

32. THAT diet is good which makes lean, and then renews. Conſider of the ways to effect it.

## Medical receipts of the lord *Bacon*.

*His lordſhip's uſual receipt for the gout, to which he refers Nat. Hiſt. Cent.* I. *N.* 60. *p.* 16.

### 1. *The poultis.*

TAKE of manchet about three ounces, the crumb only thin cut; let it be boiled in milk till it grow to a pulp. Add in the end a dram and a half of the powder of red roſes; of ſaffron ten grains; of oil of roſes an ounce; let it be ſpread upon a linen cloth, and applied lukewarm, and continued for three hours ſpace.

### 2. *The bath or fomentation.*

TAKE of ſage leaves half a handful; of the root of hemlock ſliced ſix drams; of briony roots half an ounce; of the leaves of red roſes two pugils; let them be boiled in a pottle of water, wherein ſteel hath been quenched, till the liquor come to a quart. After the ſtraining, put in half a handful of bay ſalt. Let it be uſed with ſcarlet cloth, or ſcarlet wool, dipped in the liquor hot, and ſo renewed ſeven times; all in the ſpace of a quarter of an hour, or little more.

### 3. *The plaiſter.*

TAKE *Emplaſtrum diacalciteos*, as much as is ſufficient for the part you mean to cover. Let it be diſſolved with oil of roſes, in ſuch a conſiſtence as will ſtick; and ſpread upon a piece of holland, and applied.

### *His lordſhip's broth and fomentation for the ſtone.*

### *The broth.*

TAKE one dram of *eryngium* roots, cleanſed and ſliced; and boil them together with a chicken. In the end, add of elder flowers, and marigold flowers together, one pugil, of angelica ſeed half a dram, of raiſins of the ſun ſtoned fifteen, of roſemary, thyme, mace, together, a little.

IN ſix ounces of this broth, or thereabouts, let there be diſſolved of white *cremor tartari* three grains.

EVERY third or fourth day, take a ſmall toaſt of manchet, dipped in oil of ſweet almonds new drawn, and ſprinkled with a little loaf ſugar. You may make the broth for two days, and take the one half every day. If you find the ſtone to ſtir, forbear the toaſt for a courſe or two. The intention of

this broth is, not to void, but to undermine the quarry of the ſtones in the kidneys.

*The fomentation.*

TAKE of leaves of violets, mallows, pellitory of the wall, together, one handful; of flowers of camomile and melilot, together one pugil; the root of marſh-mallows one ounce; of anis and fenel-ſeeds together, one ounce and a half; of flax-ſeed two drams. Make a decoction in ſpring water.

*The ſecond receipt, ſhewing the way of making a certain ointment, which his lordſhip called,* unguentum fragrans ſive Romanum; *the fragrant or Roman unguent.*

TAKE of the fat of a deer half a pound; of oil of ſweet almonds two ounces: let them be ſet upon a very gentle fire, and ſtirr'd with a ſtick of juniper till they are melted. Add of root of flower-de-luce powdered, damaſk roſes powdered together, one dram; of myrrh diſſolved in roſe-water half a dram; of cloves half a ſcruple; of civet four grains; of muſk ſix grains; of oil of mace expreſſed one drop; as much of roſe water as ſufficeth to keep the unguent from being too thick. Let all theſe be put together in a glaſs, and ſet upon the embers for the ſpace of an hour, and ſtirred with a ſtick of juniper.

NOTE; that in the confection of this ointment, there was not uſed above a quarter of a pound, and a tenth part of a quarter of deer's ſuet: and that all the ingredients, except the oil of almonds, were doubled when the ointment was half made, becauſe the fat things ſeemed to be too predominant.

*The third receipt. A* manus Chriſti *for the ſtomach.*

TAKE of the beſt pearls very finely pulveriz'd one dram; of ſal nitre one ſcruple; of tartar two ſcruples; of ginger and galingal together, one ounce and a half; of *calamus*, root of *enula campana*, nutmeg, together, one ſcruple and a half; of amber ſixteen grains; of the beſt muſk ten grains; with roſe water and the fineſt ſugar, let there be made a *manus Chriſti.*

*The fourth receipt. A ſecret for the ſtomach.*

TAKE *lignum aloes* in groſs ſhavings, ſteep them in ſack, or alicant, changed twice, half an hour at a time, till the bitterneſs be drawn forth. Then take the ſhavings forth, and dry them in the ſhade, and beat them to an excellent powder. Of that powder, with the ſyrup of citrons, make a ſmall pill, to be taken before ſupper.

NEW

# NEW ATLANTIS.

## A WORK Unfiniſhed.

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## TO THE READER.

THIS fable my lord deviſed, to the end that he might exhibit therein, a model or deſcription of a college, inſtituted for the interpreting of nature, and the producing of great and marvellous works, for the benefit of men; under the name of *Solomon*'s houſe, or the college of the ſix days works. And even ſo far his lordſhip hath proceeded, as to finiſh that part. Certainly the model is more vaſt and high, than can poſſibly be imitated in all things; notwithſtanding moſt things therein are within men's power to effect. His lordſhip thought alſo in this preſent fable, to have compoſed a frame of laws, or of the beſt ſtate or mould of a common-wealth; but foreſeeing it would be a long work, his deſire of collecting the natural hiſtory diverted him, which he preferred many degrees before it.

THIS work of the new *Atlantis* (as much as concerneth the *Engliſh* edition) his lordſhip deſigned for this place; in regard it hath ſo near affinity (in one part of it) with the preceding natural hiſtory.

W. RAWLEY.

# NEW ATLANTIS.

WE ſailed from *Peru* (where we had continued by the ſpace of one whole year) for *China* and *Japan*, by the ſouth ſea, taking with us victuals for twelve months; and had good winds from the eaſt, though ſoft and weak, for five months ſpace and more. But then the wind came about, and ſettled in the weſt for many days, ſo as we could make little or no way, and were ſometimes in purpoſe to turn back. But then again there aroſe ſtrong and great winds from the ſouth, with a point eaſt, which carried us up (for all that we could do) towards the north: by which time our victuals failed us, though we had made good ſpare of them. So that finding our ſelves in the midſt of the greateſt wilderneſs of waters in the world, without victual, we gave our ſelves for loſt men, and prepared for death. Yet we did lift up our hearts and voices to God above, who ſheweth his wonders in the deep; beſeeching him of his mercy, that as in the beginning he diſcovered the face of the deep, and brought forth dry land; ſo he would now diſcover land to us, that we might not periſh. And it came to paſs, that the next day about evening, we ſaw within a kenning before us, towards the north, as it were thick clouds, which did put us in ſome hope of land; knowing how that part of the ſouth ſea was utterly unknown; and might have iſlands or continents, that hitherto were not come to light. Wherefore we bent our courſe thither, where we ſaw the appearance of land all that night; and in the dawning of the next day, we might plainly diſcern that it was a land, flat to our ſight, and full of boſcage, which made it ſhew the more dark. And after an hour and a half's ſailing, we enter'd into a good haven, being the port of a fair city; not great indeed, but well built, and that gave a pleaſant view from the ſea: and we thinking every minute long till we were on land, came cloſe to the ſhore, and offered to land. But ſtraightways we ſaw divers of the people with baſtons in their hands, (as it were) forbidding us to land; yet without any cries or fierceneſs, but only as warning us off, by ſigns that they made. Whereupon being not a little diſcomforted, we were adviſing with our ſelves what we ſhould do. During which time there made forth to us a ſmall boat, with about eight perſons in it; whereof one of them had in his hand a tipſtaff of a yellow cane, tipped at both ends with blue, who made aboard our ſhip, without any ſhew of diſtruſt at all. And when he ſaw one of our number preſent himſelf ſomewhat afore the reſt, he drew forth a little ſcrole of parchment (ſomewhat yellower than our parchment, and ſhining like the leaves of writing tables, but otherwiſe ſoft and flexible) and delivered it to our foremoſt man. In which ſcrole were written in ancient *Hebrew*, and in ancient *Greek*, and in good *Latin* of the ſchool, and in *Spaniſh*, theſe words; Land ye not, none of you, and provide to be gone, from this coaſt, within ſixteen days, except you have farther time given you: mean while, if you want freſh water, or victual,

victual, or help for your ſick, or that your ſhip needeth repair, write down your wants, and you ſhall have that which belongeth to mercy. This ſcrole was ſigned with a ſtamp of cherubims wings, not ſpread, but hanging downwards, and by them a croſs. This being delivered, the officer returned, and left only a ſervant with us to receive our anſwer. Conſulting hereupon amongſt our ſelves, we were much perplexed. The denial of landing, and haſty warning us away, troubled us much; on the other ſide, to find that the people had languages, and were ſo full of humanity, did comfort us not a little. And above all, the ſign of the croſs to that inſtrument was to us a great rejoicing, and as it were a certain preſage of good. Our anſwer was in the *Spaniſh* tongue; That for our ſhip it was well; for we had rather met with calms and contrary winds, than any tempeſts. For our ſick they were many, and in very ill caſe; ſo that if they were not permitted to land, they ran in danger of their lives. Our other wants we ſet down in particular; adding, that we had ſome little ſtore of merchandize, which if it pleaſed them to deal for, it might ſupply our wants, without being chargeable unto them. We offered ſome reward in piſtolets unto the ſervant, and a piece of crimſon velvet to be preſented to the officer: but the ſervant took them not, nor would ſcarce look upon them; and ſo left us, and went back in another little boat which was ſent for him.

About three hours after we had diſpatched our anſwer, there came towards us a perſon (as it ſeemed) of place. He had on him a gown with wide ſleeves, of a kind of water chamblet, of an excellent azure colour, far more gloſſy than ours; his under apparel was green, and ſo was his hat, being in the form of a turban, daintily made, and not ſo huge as the *Turkiſh* turbans; and the locks of his hair came down below the brims of it. A reverend man was he to behold. He came in a boat, gilt in ſome part of it, with four perſons more only in that boat; and was followed by another boat, wherein were ſome twenty. When he was come within a flight ſhot of our ſhip, ſigns were made to us, that we ſhould ſend forth ſome to meet him upon the water, which we preſently did in our ſhip-boat, ſending the principal man amongſt us ſave one, and four of our number with him. When we were come within ſix yards of their boat, they called to us to ſtay, and not to approach farther, which we did. And thereupon the man, whom I before deſcribed, ſtood up, and with a loud voice in *Spaniſh*, aſked, are ye Chriſtians? We anſwered, we were; fearing the leſs, becauſe of the croſs we had ſeen in the ſubſcription. At which anſwer the ſaid perſon lift up his right hand towards heaven, and drew it ſoftly to his mouth, (which is the geſture they uſe when they thank God) and then ſaid: If ye will ſwear (all of you) by the merits of the Saviour, that ye are no pirates: nor have ſhed blood lawfully nor unlawfully within forty days paſt; you may have licence to come on land. We ſaid, we were all ready to take that oath. Whereupon one of thoſe that were with him, being (as it ſeemed) a notary, made an entry of this act. Which done, another of the attendants of the great perſon, which was with him in the ſame boat, after his lord had ſpoken a little to him, ſaid aloud; My lord would have you know, that it is not of pride, or greatneſs, that he cometh not aboard your ſhip; but for that, in your anſwer, you declare, that you have many ſick amongſt you, he was warned by the conſervator of health of the city, that he ſhould keep a diſtance. We bowed our ſelves towards him, and anſwered, we were his humble ſervants; and accounted for great honour, and ſingular humanity towards us, that which was already done; but hoped well, that the

the nature of the ſickneſs of our men was not infectious. So he returned; and a while after came the notary to us aboard our ſhip; holding in his hand a fruit of that countrey, like an orange, but of colour between orange-tawny and ſcarlet, which caſt a moſt excellent odour. He uſed it (as it ſeemeth) for a preſervative againſt infection. He gave us our oath; by the name of *Jeſus*, and his merits: and after told us, that the next day by ſix of the clock in the morning we ſhould be ſent to, and brought to the ſtrangers houſe, (ſo he called it,) where we ſhould be accommodated of things, both for our whole, and for our ſick. So he left us; and when we offered him ſome piſtolets, he ſmiling, ſaid; he muſt not be twice paid for one labour: meaning (as I take it) that he had a ſalary ſufficient of the ſtate for his ſervice. For (as I after learned) they call an officer that taketh rewards, twice paid.

The next morning early, there came to us the ſame officer that came to us at firſt with his cane, and told us, he came to conduct us to the ſtrangers houſe; and that he had prevented the hour, becauſe we might have the whole day before us, for our buſineſs. For (ſaid he) if you will follow my advice, there ſhall firſt go with me ſome few of you, and ſee the place, and how it may be made convenient for you; and then you may ſend for your ſick, and the reſt of your number, which ye will bring on land. We thanked him, and ſaid, that this care, which he took of deſolate ſtrangers, God would reward. And ſo ſix of us went on land with him: and when we were on land, he went before us, and turned to us, and ſaid; he was but our ſervant, and our guide. He led us through three fair ſtreets; and all the way we went, there were gathered ſome people on both ſides, ſtanding in a row; but in ſo civil a faſhion, as if it had been, not to wonder at us, but to welcome us; and divers of them, as we paſſed by them, put their arms a little abroad; which is their geſture, when they bid any welcome. The ſtrangers houſe is a fair and ſpacious houſe, built of brick, of ſomewhat a bluer colour than our brick; and with handſome windows, ſome of glaſs, ſome of a kind of cambrick oiled. He brought us firſt into a fair parlour above ſtairs, and then aſked us, what number of perſons we were? And how many ſick? We anſwered, we were in all (ſick and whole) one and fifty perſons, whereof our ſick were ſeventeen. He deſired us to have patience a little, and to ſtay till he came back to us, which was about an hour after; and then he led us to ſee the chambers, which were provided for us, being in number nineteen: They having caſt it (as it ſeemeth) that four of thoſe chambers, which were better than the reſt, might receive four of the principal men of our company, and lodge them alone by themſelves; and the other fifteen chambers were to lodge us, two and two together. The chambers were handſome and chearful chambers, and furniſhed civilly. Then he led us to a long gallery, like a dorture, where he ſhewed us all along the one ſide (for the other ſide was but wall and window) ſeventeen cells, very neat ones, having partitions of cedar wood. Which gallery and cells, being in all forty, (many more than we needed,) were inſtituted as an infirmary for ſick perſons. And he told us withal, that as any of our ſick waxed well, he might be removed from his cell to a chamber: for which purpoſe there were ſet forth ten ſpare chambers, beſides the number we ſpake of before. This done, he brought us back to the parlour, and lifting up his cane a little, (as they do when they give any charge or command,) ſaid to us, ye are to know that the cuſtom of the land requireth, that after this day and to-morrow, (which we give you for removing your people from your ſhip,) you are to keep within doors for

three days. But let it not trouble you, nor do not think your ſelves reſtrained, but rather left to your reſt and eaſe. You ſhall want nothing, and there are ſix of our people appointed to attend you, for any buſineſs you may have abroad. We gave him thanks, with all affection and reſpect, and ſaid; God ſurely is manifeſted in this land. We offered him twenty piſtolets; but he ſmiled, and only ſaid; what? twice paid! And ſo he left us. Soon after our dinner was ſerved in; which was right good viands, both for bread and meat: better than any collegiate diet, that I have known in *Europe*. We had alſo drink of three ſorts, all wholeſome and good; wine of the grape; a drink of grain, ſuch as is with us our ale, but more clear: and a kind of cyder made of a fruit of that countrey; a wonderful pleaſing and refreſhing drink. Beſides, there were brought in to us great ſtore of thoſe ſcarlet oranges for our ſick; which (they ſaid) were an aſſured remedy for ſickneſs taken at ſea. There was given us alſo, a box of ſmall grey or whitiſh pills, which they wiſhed our ſick ſhould take, one of the pills every night before ſleep; which (they ſaid) would haſten their recovery. The next day, after that our trouble of carriage, and removing of our men, and goods out of our ſhip, was ſomewhat ſettled and quiet, I thought good to call our company together; and when they were aſſembled, ſaid unto them; my dear friends, let us know our ſelves, and how it ſtandeth with us. We are men caſt on land, as *Jonas* was, out of the whale's belly, when we were as buried in the deep: and now we are on land, we are but between death and life; for we are beyond both the old world and the new; and whether ever we ſhall ſee *Europe*, God only knoweth. It is a kind of miracle hath brought us hither: and it muſt be little leſs that ſhall bring us hence. Therefore in regard of our deliverance paſt, and our danger preſent and to come, let us look up to God, and every man reform his own ways. Beſides we are come here amongſt a chriſtian people, full of piety and humanity: let us not bring that confuſion of face upon our ſelves, as to ſhew our vices, or unworthineſs before them. Yet there is more: for they have by commandment, (though in form of courteſy) cloyſter'd us within theſe walls for three days: who knoweth, whether it be not to take ſome taſte of our manners and conditions? And if they find them bad, to baniſh us ſtraightways; if good, to give us farther time. For theſe men, that they have given us for attendance, may withal have an eye upon us. Therefore for God's love, and as we love the weale of our ſouls and bodies, let us ſo behave our ſelves, as we may be at peace with God, and may find grace in the eyes of this people. Our company with one voice thanked me for my good admonition, and promiſed me to live ſoberly and civilly, and without giving any the leaſt occaſion of offence. So we ſpent our three days joyfully, and without care, in expectation of what would be done with us, when they were expired. During which time, we had every hour joy of the amendment of our ſick; who thought themſelves caſt into ſome divine pool of healing; they mended ſo kindly, and ſo faſt.

THE morrow after our three days were paſt, there came to us a new man that we had not ſeen before, cloathed in blue as the former was, ſave that his turban was white, with a ſmall red croſs on the top. He had alſo a tippet of fine linen. At his coming in he did bend to us a little, and put his arms abroad. We of our parts ſaluted him in a very lowly and ſubmiſſive manner; as looking that from him we ſhould receive ſentence of life or death. He deſired to ſpeak with ſome few of us: whereupon ſix of us only ſtayed, and the reſt avoided the room. He ſaid; I am by office governour

of this houſe of ſtrangers, and by vocation I am a Chriſtian prieſt; and therefore am come to you, to offer you my ſervice, both as ſtrangers, and chiefly as Chriſtians. Some things I may tell you, which I think you will not be unwilling to hear. The ſtate hath given you licence to ſtay on land for the ſpace of ſix weeks: and let it not trouble you if your occaſions aſk farther time, for the law in this point is not preciſe; and I do not doubt but my ſelf ſhall be able to obtain for you ſuch farther time as may be convenient. Ye ſhall alſo underſtand, that the ſtrangers houſe is at this time rich, and much beforehand; for it hath laid up revenue theſe thirty ſeven years; for ſo long it is ſince any ſtranger arrived in this part: and therefore take ye no care; the ſtate will defray you all the time you ſtay; neither ſhall you ſtay one day the leſs for that. As for any merchandize you have brought, ye ſhall be well uſed, and have your return either in merchandize, or in gold and ſilver: for to us it is all one. And if you have any other requeſt to make, hide it not. For ye ſhall find, we will not make your countenance to fall by the anſwer ye ſhall receive. Only this I muſt tell you, that none of you muſt go above a *karan*, (that is with them a mile and an half) from the walls of the city without ſpecial leave. We anſwered, after we had looked a while upon one another, admiring this gracious and parent-like uſage; that we could not tell what to ſay: for we wanted words to expreſs our thanks; and his noble free offers left us nothing no aſk. It ſeemed to us, that we had before us a picture of our ſalvation in heaven: for we that were a while ſince in the jaws of death, were now brought into a place, where we found nothing but conſolations. For the commandment laid upon us, we would not fail to obey it, though it was impoſſible but our hearts ſhould be inflamed to tread farther upon this happy and holy ground. We added; that our tongues ſhould firſt cleave to the roofs of our mouths, ere we ſhould forget, either his reverend perſon, or this whole nation, in our prayers. We alſo moſt humbly beſought him to accept of us as his true ſervants, by as juſt a right as ever men on earth were bounden, laying and preſenting, both our perſons, and all we had at his feet. He ſaid; he was a prieſt, and looked for a prieſt's reward; which was our brotherly love, and the good of our ſouls and bodies. So he went from us, not without tears of tenderneſs in his eyes; and left us alſo confuſed with joy and kindneſs, ſaying amongſt our ſelves, that we were come into a land of angels, which did appear to us daily, and prevent us with comforts which we thought not of, much leſs expected.

THE next day about ten of the clock, the governour came to us again, and after ſalutations ſaid familiarly; that he was come to viſit us; and called for a chair, and ſat him down: and we being ſome ten of us (the reſt were of the meaner ſort, or elſe gone abroad) ſat down with him. And when we were ſet, he began thus: We of this iſland of *Benſalem* (for ſo they call it in their language) have this; that by means of our ſolitary ſituation, and of the laws of ſecrecy which we have for our travellers, and our rare admiſſion of ſtrangers; we know well moſt part of the habitable world, and are our ſelves unknown. Therefore becauſe he that knoweth leaſt is fitteſt to aſk queſtions, it is more reaſon for the entertainment of the time, that ye aſk me queſtions, than that I aſk you. We anſwered; that we humbly thanked him, that he would give us leave ſo to do: and that we conceived by the taſte we had already, that there was no worldly thing on earth more worthy to be known, than the ſtate of that happy land. But above all (we ſaid) ſince that we were met from the ſeveral ends of the world,

world, and hoped aſſuredly that we ſhould meet one day in the kingdom of heaven (for that we were both parts Chriſtians:) we deſired to know (in reſpect that land was ſo remote, and ſo divided by vaſt and unknown ſeas, from the land where our Saviour walked on earth) who was the Apoſtle of that nation, and how it was converted to the faith? It appeared in his face that he took great contentment in this our queſtion: he ſaid, ye knit my heart to you, by aſking this queſtion in the firſt place; for it ſheweth that you firſt ſeek the kingdom of heaven; and I ſhall gladly and briefly ſatisfy your demand.

About twenty years after the aſcenſion of our Saviour, it came to paſs, that there was ſeen by the people of *Renfuſa*, (a city upon the eaſtern coaſt of our iſland) within night, (the night was cloudy and calm) as it might be ſome miles in the ſea, a great pillar of light; not ſharp, but in form of a column, or cylinder, riſing from the ſea, a great way up towards heaven; and on the top of it was ſeen a large croſs of light, more bright and reſplendent than the body of the pillar. Upon which ſo ſtrange a ſpectacle, the people of the city gathered apace together upon the ſands to wonder; and ſo after put themſelves into a number of ſmall boats, to go nearer to this marvellous ſight. But when the boats were come within (about) ſixty yards of the pillar, they found themſelves all bound, and could go no farther, yet ſo as they might move to go about, but might not approach nearer: ſo as the boats ſtood all as in a theater, beholding this light as an heavenly ſign. It ſo fell out, that there was in one of the boats, one of the wiſe men of the ſociety of *Solomon*'s houſe; which houſe or college, (my good brethren) is the very eye of this kingdom; who having a while attentively and devoutly viewed and contemplated this pillar and croſs, fell down upon his face; and then raiſing himſelf upon his knees, and lifting up his hands to heaven, made his prayers in this manner:

Lord God of heaven and earth; thou haſt vouchſafed of thy grace, to thoſe of our order, to know thy works of creation, and the ſecrets of them; and to diſcern (as far as appertaineth to the generations of men) between divine miracles, works of nature, works of art, and impoſtures and illuſions of all ſorts. I do here acknowledge and teſtify before this people, that the thing we now ſee before our eyes, is thy finger, and a true miracle: And foraſmuch as we learn in our books, that thou never workeſt miracles, but to a divine and excellent end, (for the laws of nature are thine own laws, and thou exceedeſt them not but upon great cauſe) we moſt humbly beſeech thee to proſper this great ſign, and to give us the interpretation and uſe of it in mercy; which thou doſt in ſome part ſecretly promiſe, by ſending it unto us.

When he had made his prayer, he preſently found the boat he was in moveable and unbound; whereas all the reſt remained ſtill faſt; and taking that for an aſſurance of leave to approach, he cauſed the boat to be ſoftly, and with ſilence rowed towards the pillar. But ere he came near it, the pillar and croſs of light brake up, and caſt it ſelf abroad, as it were into a firmament of many ſtars; which alſo vaniſhed ſoon after, and there was nothing left to be ſeen, but a ſmall ark or cheſt of cedar, dry, and not wet at all with water, though it ſwam. And in the fore-end of it which was toward him, grew a ſmall green branch of palm; and when the wiſe man had taken it with all reverence into his boat, it opened of it ſelf, and there were found in it a book and a letter; both written in fine parchment, and wrapped in ſindons of linen. The book contained all the canonical books

of the old and new Teſtament, according as you have them; (for we know well what the churches with you receive;) and the *Apocalypſe* it ſelf; and ſome other books of the new Teſtament, which were not at that time written, were nevertheleſs in the book: And for the letter, it was in theſe words:

I *Bartholomew*, a ſervant of the Higheſt, and Apoſtle of *Jeſus Chriſt*, was warned by an angel that appeared to me in a viſion of glory, that I ſhould commit this ark to the floods of the ſea. Therefore I do teſtify and declare, unto that people where God ſhall ordain this ark to come to land, that in the ſame day is come unto them ſalvation, and peace, and good-will, from the Father, and from the Lord *Jeſus*.

There was alſo in both theſe writings, as well the book, as the letter, wrought a great miracle, conform to that of the Apoſtles in the original gift of tongues. For there being at that time in this land, *Hebrews*, *Perſians*, and *Indians*, beſides the natives, every one read upon the book and letter, as if they had been written in his own language. And thus was this land ſaved from infidelity, (as the remain of the old world was from water) by an ark, through the apoſtolical and miraculous evangeliſm of S. *Bartholomew*. And here he pauſed, and a meſſenger came, and called him forth from us. So this was all that paſſed in that conference.

The next day the ſame governour came again to us immediately after dinner, and excuſed himſelf, ſaying; that the day before he was called from us ſomewhat abruptly, but now he would make us amends, and ſpend time with us, if we held his company and conference agreeable: we anſwered; that we held it ſo agreeable and pleaſing to us, as we both forgot dangers paſt, and fears to come, for the time we heard him ſpeak; and that we thought an hour ſpent with him, was worth years of our former life. He bowed himſelf a little to us, and after we were ſet again, he ſaid; well, the queſtions are on your part. One of our number ſaid, after a little pauſe; that there was a matter we were no leſs deſirous to know, than fearful to aſk, leſt we might preſume too far. But encouraged by his rare humanity towards us, (that could ſcarce think our ſelves ſtrangers, being his vowed and profeſſed ſervants) we would take the hardineſs to propound it: humbly beſeeching him, if he thought it not fit to be anſwered, that he would pardon it, though he rejected it. We ſaid; we well obſerved thoſe his words, which he formerly ſpake, that this happy iſland where we now ſtood, was known to few, and yet knew moſt of the nations of the world, which we found to be true, conſidering they had the languages of *Europe*, and knew much of our ſtate and buſineſs; and yet we in *Europe*, (notwithſtanding all the remote diſcoveries and navigations of this laſt age) never heard any of the leaſt inkling or glimpſe of this iſland. This we found wonderful ſtrange; for that all nations have interknowledge one of another, either by voyage into foreign parts, or by ſtrangers that come to them: and though the traveller into a foreign country, doth commonly know more by the eye, than he that ſtayeth at home can by relation of the traveller; yet both ways ſuffice to make a mutual knowledge, in ſome degree, on both parts. But for this iſland, we never heard tell of any ſhip of theirs, that had been ſeen to arrive upon any ſhore of *Europe*; no, nor of either the *Eaſt* or *Weſt Indies*, nor yet of any ſhip of any other part of the world, that had made return from them. And yet the marvel reſted not in this. For the ſituation of it, (as his lordſhip ſaid) in the ſecret conclave of ſuch a vaſt ſea might cauſe it. But then, that they ſhould have knowledge

knowledge of the languages, books, affairs, of thoſe that lie ſuch a diſtance from them, it was a thing we could not tell what to make of; for that it ſeemed to us a condition and propriety of divine powers and beings, to be hidden and unſeen to others, and yet to have others open, and as in a light to them. At this ſpeech the governour gave a gracious ſmile, and ſaid; that we did well to aſk pardon for this queſtion we now aſked; for that it imported, as if we thought this land a land of magicians, that ſent forth ſpirits of the air into all parts, to bring them news and intelligence of other countries. It was anſwered by us all, in all poſſible humbleneſs, but yet with a countenance taking knowledge, that we knew that he ſpake it but merrily. That we were apt enough to think there was ſomething ſupernatural in this iſland, but yet rather as angelical than magical. But to let his lordſhip know truly, what it was that made us tender and doubtful to aſk this queſtion, it was not any ſuch conceit, but becauſe we remembred, he had given a touch in his former ſpeech, that this land had laws of ſecrecy touching ſtrangers. To this he ſaid; you remember it aright; and therefore in that I ſhall ſay to you, I muſt reſerve ſome particulars, which it is not lawful for me to reveal; but there will be enough left to give you ſatisfaction.

You ſhall underſtand (that which perhaps you will ſcarce think credible) that about three thouſand years ago, or ſomewhat more, the navigation of the world (eſpecially for remote voyages) was greater than at this day. Do not think with your ſelves, that I know not how much it is increaſed with you within theſe threeſcore years: I know it well; and yet I ſay greater then than now: whether it was, that the example of the ark, that ſaved the remnant of men from the univerſal deluge, gave men confidence to adventure upon the waters, or what it was, but ſuch is the truth. The *Phoenicians*, and eſpecially the *Tyrians*, had great fleets. So had the *Carthaginians* their colony, which is yet farther weſt. Toward the eaſt, the ſhipping of *AEgypt*, and of *Palaeſtine*, was likewiſe great. *China* alſo, and the great *Atlantis*, (that you call *America*) which have now but junks and canoes, abounded then in tall ſhips. This iſland (as appeareth by faithful regiſters of thoſe times) had then fifteen hundred ſtrong ſhips, of great content. Of all this, there is with you ſparing memory, or none; but we have large knowledge thereof.

At that time, this land was known and frequented by the ſhips and veſſels of all the nations beforenamed. And (as it cometh to paſs) they had many times men of other countries, that were no ſailors, that came with them; as *Perſians*, *Chaldaeans*, *Arabians*; ſo as almoſt all nations of might and fame reſorted hither; of whom we have ſome ſtirps and little tribes with us at this day. And for our own ſhips, they went ſundry voyages, as well to your ſtreights, which you call the pillars of *Hercules*, as to other parts in the *Atlantick* and *Mediterranean* ſeas; as to *Peguin*, (which is the ſame with *Cambalaine*) and *Quinzy*, upon the oriental ſeas, as far as to the borders of the eaſt *Tartary*.

At the ſame time, and an age after, or more, the inhabitants of the great *Atlantis* did flouriſh. For though the narration and deſcription which is made by a great man with you, that the deſcendents of *Neptune* planted there; and of the magnificent temple, palace, city and hill; and the manifold ſtreams of goodly navigable rivers, which (as ſo many chains) environed the ſame ſite and temple; and the ſeveral degrees of aſcent, whereby men did climb up to the ſame, as if it had been a *ſcala coeli*; be all poetical and

fabulous: yet ſo much is true, that the ſaid countrey of *Atlantis*, as well that of *Peru* then called *Coya*, as that of *Mexico* then named *Tyrambel*, were mighty and proud kingdoms, in arms, ſhipping, and riches: ſo mighty, as at one time (or at leaſt within the ſpace of ten years) they both made two great expeditions; they of *Tyrambel*, through the *Atlantick* to the *Mediterranean Sea*; and they of *Coya*, through the *South Sea* upon this our iſland: and for the former of theſe, which was into *Europe*, the ſame author amongſt you, (as it ſeemeth) had ſome relation from the *AEgyptian* prieſt, whom he citeth. For aſſuredly, ſuch a thing there was. But whether it were the ancient *Athenians* that had the glory of the repulſe, and reſiſtance of thoſe forces, I can ſay nothing: But certain it is, there never came back either ſhip, or man, from that voyage. Neither had the other voyage of thoſe of *Coya* upon us, had better fortune, if they had not met with enemies of greater clemency. For the king of this iſland, (by name *Altabin*,) a wiſe man, and a great warrior; knowing well both his own ſtrength, and that of his enemies; handled the matter ſo, as he cut off their land forces from their ſhips, and entoiled both their navy, and their camp, with a greater power than theirs, both by ſea and land; and compelled them to render themſelves without ſtriking ſtroke: and after they were at his mercy, contenting himſelf only with their oath, that they ſhould no more bear arms againſt him, diſmiſſed them all in ſafety. But the divine revenge overtook not long after thoſe proud enterprizes. For within leſs than the ſpace of one hundred years, the great *Atlantis* was utterly loſt and deſtroyed: not by a great earthquake, as your man ſaith, (for that whole tract is little ſubject to earthquakes;) but by a particular deluge, or inundation: thoſe countries having, at this day, far greater rivers, and far higher mountains, to pour down waters, than any part of the old world. But it is true, that the ſame inundation was not deep; not paſt forty foot, in moſt places, from the ground: ſo that, although it deſtroyed man and beaſt generally, yet ſome few wild inhabitants of the woods eſcaped. Birds alſo were ſaved by flying to the high trees and woods. For as for men, although they had buildings in many places, higher than the depth of the water; yet that inundation, though it were ſhallow, had a long continuance; whereby they of the vale, that were not drowned, periſhed for want of food, and other things neceſſary. So as marvel you not at the thin population of *America*, nor at the rudeneſs and ignorance of the people; for you muſt account your inhabitants of *America* as a young people; younger a thouſand years, at the leaſt, than the reſt of the world: for that there was ſo much time between the univerſal flood, and their particular inundation. For the poor remnant of human ſeed, which remained in their mountains, peopled their countrey again ſlowly, by little and little; and being ſimple and a ſavage people, (not like *Noah* and his ſons, which was the chief family of the earth) they were not able to leave letters, arts, and civility to their poſterity; and having likewiſe in their mountainous habitations been uſed, (in reſpect of the extreme cold of thoſe regions,) to cloath themſelves with the ſkins of tygers, bears, and great hairy goats, that they have in thoſe parts; when after they came down into the valley, and found the intolerable heats which are there, and knew no means of lighter apparel, they were forced to begin the cuſtom of going naked, which continueth at this day. Only they take great pride and delight in the feathers of birds; and this alſo they took from thoſe their anceſtors of the mountains, who were invited unto it, by the infinite flights of birds, that came up to the high grounds, while the waters ſtood below. So

you

you ſee, by this main accident of time, we loſt our traffick with the *Americans*, with whom, of all others, in regard they lay neareſt to us, we had moſt commerce. As for the other parts of the world, it is moſt manifeſt, that in the ages following, (whether it were in reſpect of wars, or by a natural revolution of time,) navigation did every where greatly decay; and eſpecially far voyages, (the rather by the uſe of gallies, and ſuch veſſels as could hardly brook the ocean) were altogether left and omitted. So then, that part of entercourſe which could be from other nations to ſail to us, you ſee how it hath long ſince ceaſed; except it were by ſome rare accident, as this of yours. But now of the ceſſation of that other part of entercourſe, which might be by our ſailing to other nations, I muſt yield you ſome other cauſe. For I cannot ſay, (if I ſhall ſay truly) but our ſhipping, for number, ſtrength, mariners, pilots, and all things that appertain to navigation, is as great as ever: and therefore why we ſhould ſit at home, I ſhall now give you an account by it ſelf; and it will draw nearer, to give you ſatisfaction, to your principal queſtion.

THERE reigned in this iſland, about nineteen hundred years ago, a king, whoſe memory of all others we moſt adore; not ſuperſtitiouſly, but as a divine inſtrument, though a mortal man; his name was *Solomona:* and we eſteem him as the law-giver of our nation. This king had a large heart, inſcrutable for good, and was wholly bent to make his kingdom and people happy. He therefore taking into conſideration, how ſufficient and ſubſtantive this land was, to maintain itſelf without any aid (at all) of the foreigner, being five thouſand ſix hundred mile in circuit, and of rare fertility of ſoil in the greateſt part thereof; and finding alſo the ſhipping of this countrey might be plentifully ſet on work, both by fiſhing, and by tranſportations from port to port, and likewiſe by ſailing unto ſome ſmall iſlands that are not far from us, and are under the crown and laws of this ſtate; and recalling into his memory, the happy and flouriſhing eſtate wherein this land then was; ſo as it might be a thouſand ways altered to the worſe, but ſcarce any one way to the better; though nothing wanted to his noble and heroical intentions, but only (as far as human foreſight might reach) to give perpetuity to that, which was in his time ſo happily eſtabliſhed. Therefore amongſt his other fundamental laws of this kingdom, he did ordain the interdicts and prohibitions, which we have touching entrance of ſtrangers; which at that time (though it was after the calamity of *America*) was frequent; doubting novelties, and commixture of manners. It is true, the like law, againſt the admiſſion of ſtrangers without licence, is an ancient law in the kingdom of *China*, and yet continued in uſe: But there it is a poor thing; and hath made them a curious, ignorant, fearful, fooliſh nation. But our law-giver made his law of another temper. For firſt, he hath preſerved all points of humanity, in taking order, and making proviſion for the relief of ſtrangers diſtreſſed, whereof you have taſted. At which ſpeech (as reaſon was) we all roſe up, and bowed ourſelves. He went on. That king alſo ſtill deſiring to join humanity and policy together; and thinking it againſt humanity, to detain ſtrangers here againſt their wills; and againſt policy that they ſhould return, and diſcover their knowledge of this eſtate, he took this courſe: he did ordain, that of the ſtrangers that ſhould be permitted to land, as many (at all times) might depart as would; but as many as would ſtay, ſhould have very good conditions, and means to live, from the ſtate. Wherein he ſaw ſo far, that now in ſo many ages ſince the prohibition, we have memory, not of one ſhip that ever returned, and but

of

of thirteen perſons only, at ſeveral times, that choſe to return in our bottoms. What thoſe few that returned, may have reported abroad, I know not: But you muſt think, whatſoever they have ſaid, could be taken where they came but for a dream. Now for our travelling from hence into parts abroad, our law-giver thought fit altogether to reſtrain it. So is it not in *China*. For the *Chineſes* ſail where they will, or can; which ſheweth, that their law of keeping out ſtrangers, is a law of puſillanimity and fear. But this reſtraint of ours hath one only exception, which is admirable; preſerving the good which cometh by communicating with ſtrangers, and avoiding the hurt; and I will now open it to you. And here I ſhall ſeem a little to digreſs, but you will by and by find it pertinent. Ye ſhall underſtand, (my dear friends,) that amongſt the excellent acts of that king, one above all hath the preheminence. It was the erection, and inſtitution of an order, or ſociety, which we call *Solomon*'s houſe; the nobleſt foundation (as we think) that ever was upon the earth; and the lanthorn of this kingdom. It is dedicated to the ſtudy of the works and creatures of God. Some think it beareth the founder's name a little corrupted, as if it ſhould be *Solomona*'s houſe. But the records write it, as it is ſpoken. So as I take it to be denominate of the king of the *Hebrews*, which is famous with you, and no ſtranger to us; for we have ſome parts of his works, which with you are loſt; namely, that natural hiſtory which he wrote of all plants, from the cedar of *Libanus*, to the moſs that groweth out of the wall; and of all things that have life and motion. This maketh me think, that our king finding himſelf to ſymbolize in many things with that king of the *Hebrews* (which lived many years before him) honoured him with the title of this foundation. And I am the rather induced to be of this opinion, for that I find in ancient records, this order or ſociety is ſometimes called *Solomon*'s houſe, and ſometimes the college of the ſix days works; whereby I am ſatisfied, that our excellent king had learned from the *Hebrews*, that God had created the world, and all that therein is, within ſix days; and therefore he inſtituting that houſe for the finding out of the true nature of all things, (whereby God might have the more glory in the workmanſhip of them, and men the more fruit in the uſe of them,) did give it alſo that ſecond name. But now to come to our preſent purpoſe. When the king had forbidden, to all his people, navigation into any part, that was not under his crown, he made nevertheleſs this ordinance; that every twelve years there ſhould be ſet forth, out of this kingdom, two ſhips appointed to ſeveral voyages; that in either of theſe ſhips there ſhould be a miſſion of three of the fellows, or brethren of *Solomon*'s houſe; whoſe errand was only to give us knowledge of the affairs and ſtate of thoſe countries to which they were deſigned; and eſpecially of the ſciences, arts, manufactures, and inventions of all the world; and withal to bring unto us, books, inſtruments, and patterns, in every kind: that the ſhips, after they had landed the brethren, ſhould return; and that the brethren ſhould ſtay abroad till the new miſſion. The ſhips are not otherwiſe fraught, than with ſtore of victuals, and good quantity of treaſure to remain with the brethren, for the buying of ſuch things, and rewarding of ſuch perſons, as they ſhould think fit. Now for me to tell you how the vulgar ſort of mariners are contained from being diſcovered at land; and how they that muſt be put on ſhore for any time, colour themſelves under the names of other nations; and to what places theſe voyages have been deſigned; and what places of rendezvous are appointed for the new miſſions; and the like circumſtances of the practick; I may not do it: neither is it much to your deſire.

deſire. But thus you ſee we maintain a trade, not for gold, ſilver, or jewels; nor for ſilks; nor for ſpices; nor any other commodity of matter; but only for God's firſt creature, which was light: to have light (I ſay) of the growth of all parts of the world. And when he had ſaid this, he was ſilent; and ſo were we all. For indeed we were all aſtoniſhed to hear ſo ſtrange things ſo probably told. And he perceiving that we were willing to ſay ſomewhat, but had it not ready, in great courteſy took us off; and deſcended to aſk us queſtions of our voyage and fortunes, and in the end concluded, that we might do well to think with our ſelves, what time of ſtay we would demand of the ſtate; and bade us not to ſcant our ſelves; for he would procure ſuch time as we deſired. Whereupon we all roſe up and preſented our ſelves to kiſs the ſkirt of his tippet, but he would not ſuffer us; and ſo took his leave. But when it came once amongſt our people, that the ſtate uſed to offer conditions to ſtrangers that would ſtay, we had work enough to get any of our men to look to our ſhip; and to keep them from going preſently to the governour to crave conditions. But with much ado we reſtrained them, till we might agree what courſe to take.

We took our ſelves now for free men, ſeeing there was no danger of our utter perdition; and lived moſt joyfully, going abroad, and ſeeing what was to be ſeen in the city and places adjacent, within our tedder; and obtaining acquaintance with many of the city, not of the meaneſt quality; at whoſe hands we found ſuch humanity, and ſuch a freedom and deſire to take ſtrangers as it were into their boſom, as was enough to make us forget all that was dear to us in our own countries: and continually we met with many things, right worthy of obſervation and relation; as indeed, if there be a mirror in the world worthy to hold mens eyes, it is that countrey. One day there were two of our company bidden to a feaſt of the family, as they call it. A moſt natural, pious, and reverend cuſtom it is, ſhewing that nation to be compounded of all goodneſs. This is the manner of it. It is granted to any man, that ſhall live to ſee thirty perſons deſcended of his body alive together, and all above three years old, to make this feaſt, which is done at the coſt of the ſtate. The father of the family, whom they call the *Tirſan*, two days before the feaſt, taketh to him three of ſuch friends as he liketh to chuſe; and is aſſiſted alſo by the governour of the city, or place, where the feaſt is celebrated; and all the perſons of the family of both ſexes are ſummoned to attend. Theſe two days the *Tirſan* ſitteth in conſultation, concerning the good eſtate of the family. There, if there be any diſcord or ſuits between any of the family, they are compounded and appeaſed. There, if any of the family be diſtreſſed or decayed, order is taken for their relief, and competent means to live. There, if any be ſubject to vice, or take ill courſes, they are reproved and cenſured. So likewiſe direction is given touching marriages, and the courſes of life which any of them ſhould take, with divers other the like orders and advices. The governour aſſiſteth, to the end to put in execution, by his publick authority, the decrees and orders of the *Tirſan*, if they ſhould be diſobeyed; though that ſeldom needeth; ſuch reverence and obedience they give to the order of nature. The *Tirſan* doth alſo then, ever chuſe one man from amongſt his ſons, to live in the houſe with him: who is called ever after, the ſon of the vine. The reaſon will hereafter appear. On the feaſt-day, the father, or *Tirſan*, cometh forth after divine ſervice into a large room where the feaſt is celebrated; which room hath an half

pace

pace at the upper end. Againſt the wall, in the middle of the half pace, is a chair placed for him, with a table and carpet before it. Over the chair is a ſtate made round or oval, and it is of ivy; an ivy ſomewhat whiter than ours, like the leaf of a ſilver aſp, but more ſhining; for it is green all winter. And the ſtate is curiouſly wrought with ſilver and ſilk of divers colours, broiding or binding in the ivy; and is ever of the work of ſome of the daughters of the family; and veiled over at the top with a fine net of ſilk and ſilver. But the ſubſtance of it is true ivy; whereof, after it is taken down, the friends of the family are deſirous to have ſome leaf or ſprig to keep. The *Tirſan* cometh forth with all his generation or lineage, the males before him, and the females following him; and if there be a mother, from whoſe body the whole lineage is deſcended, there is a traverſe placed in a loft above on the right hand of the chair, with a privy door, and a carved window of glaſs, leaded with gold and blue; where ſhe ſitteth, but is not ſeen. When the *Tirſan* is come forth, he ſitteth down in the chair; and all the lineage place themſelves againſt the wall, both at his back, and upon the return of the half pace, in order of their years, without difference of ſex, and ſtand upon their feet. When he is ſet, the room being always full of company, but well kept, and without diſorder; after ſome pauſe there cometh in from the lower end of the room a taratan, (which is as much as an herald) and on either ſide of him two young lads; whereof one carrieth a ſcroll of their ſhining yellow parchment; and the other a cluſter of grapes of gold, with a long foot or ſtalk. The herald and children are cloathed with mantles of ſea-water green ſattin; but the herald's mantle is ſtreamed with gold, and hath a train. Then the herald with three courteſies, or rather inclinations, cometh up as far as the half pace; and there firſt taketh into his hand the ſcroll. This ſcroll is the king's charter, containing gift of revenue, and many privileges, exemptions, and points of honour, granted to the father of the family; and it is ever ſtyled and directed, to ſuch an one, our well-beloved friend and creditor: which is a title proper only to this caſe. For they ſay, the king is debtor to no man, but for propagation of his ſubjects: the ſeal ſet to the king's charter, is the king's image, imboſſed or moulded in gold; and though ſuch charters be expedited of courſe, and as of right, yet they are varied by diſcretion, according to the number and dignity of the family. This charter the herald readeth aloud; and while it is read, the father or *Tirſan* ſtandeth up, ſupported by two of his ſons, ſuch as he chuſeth. Then the herald mounteth the half pace, and delivereth the charter into his hand: and with that there is an acclamation by all that are preſent, in their language, which is thus much; happy are the people of *Benſalem*. Then the herald taketh into his hand from the other child, the cluſter of grapes, which is of gold; both the ſtalk and the grapes. But the grapes are daintily enamelled; and if the males of the family be the greater number, the grapes are enamelled purple, with a little ſun ſet on the top; if the females, then they are enamelled into a greeniſh yellow, with a creſcent on the top. The grapes are in number as many as there are deſcendents of the family. This golden cluſter the herald delivereth alſo to the *Tirſan*; who preſently delivereth it over to that ſon, that he had formerly choſen to be in the houſe with him: who beareth it before his father as an enſign of honour, when he goeth in publick ever after; and is thereupon called the ſon of the vine. After this ceremony ended, the father or *Tirſan* retireth; and after ſome time cometh forth again to dinner, where he

ſitteth alone under the ſtate as before; and none of his deſcendents ſit with him, of what degree or dignity ſoever, except he happen to be of *Solomon*'s houſe. He is ſerved only by his own children, ſuch as are male; who perform unto him all ſervice of the table upon the knee; and the women only ſtand about him, leaning againſt the wall. The room below his half pace, hath tables on the ſides for the gueſts that are bidden; who are ſerved with great and comely order; and towards the end of dinner (which in the greateſt feaſts with them, laſteth never above an hour and a half) there is an hymn ſung, varied according to the invention of him that compoſeth it, (for they have excellent poeſy;) but the ſubject of it is (always) the praiſes of *Adam*, and *Noah*, and *Abraham*; whereof the former two peopled the world, and the laſt was the father of the faithful: concluding ever with a thankſgiving for the nativity of our Saviour, in whoſe birth the births of all are only bleſſed. Dinner being done, the *Tirſan* retireth again; and having withdrawn himſelf alone into a place, where he maketh ſome private prayers, he cometh forth the third time, to give the bleſſing; with all his deſcendents, who ſtand about him as at the firſt. Then he calleth them forth by one and by one, by name, as he pleaſeth, though ſeldom the order of age be inverted. The perſon that is called, (the table being before removed) kneeleth down before the chair, and the father layeth his hand upon his head, or her head, and giveth the bleſſing in theſe words: Son of *Benſalem*, (or daughter of *Benſalem*) thy father ſaith it; the man by whom thou haſt breath and life ſpeaketh the word; the bleſſing of the everlaſting Father, the prince of peace, and the holy dove be upon thee, and make the days of thy pilgrimage good and many. This he ſaith to every of them; and that done, if there be any of his ſons of eminent merit and virtue, (ſo they be not above two) he calleth for them again; and ſaith, laying his arm over their ſhoulders, they ſtanding; Sons, it is well you are born, give God the praiſe, and perſevere to the end. And withal delivereth to either of them a jewel, made in the figure of an ear of wheat, which they ever after wear in the front of their turban, or hat. This done, they fall to muſick and dances, and other recreations, after their manner, for the reſt of the day. This is the full order of that feaſt.

By that time ſix or ſeven days were ſpent, I was fallen into ſtraight acquaintance with a merchant of that city, whoſe name was *Joabin*. He was a Jew, and circumciſed: for they have ſome few ſtirps of Jews yet remaining among them; whom they leave to their own religion: Which they may the better do, becauſe they are of a far differing diſpoſition from the Jews in other parts. For whereas they hate the name of *Chriſt*, and have a ſecret inbred rancour againſt the people amongſt whom they live; theſe (contrariwiſe) give unto our Saviour many high attributes, and love the nation of *Benſalem* extremely. Surely this man of whom I ſpeak, would ever acknowledge that *Chriſt* was born of a virgin; and that he was more than a man; and he would tell how God made him ruler of the ſeraphims, which guard his throne; and they call him alſo the milken way, and the *Eliah* of the *Meſſias*; and many other high names; which though they be inferiour to his divine Majeſty, yet they are far from the language of other Jews. And for the countrey of *Benſalem*, this man would make no end of commending it: Being deſirous by tradition among the Jews there, to have it believed, that the people thereof were of the generations of *Abraham*, by another ſon, whom they call *Nachoran*; and that *Moſes* by a ſecret cabala, ordained the laws of *Benſalem* which they now uſe; and that when the

*Meſſias* ſhould come, and ſit in his throne at *Hieruſalem*, the king of *Benſalem* ſhould ſit at his feet, whereas other kings ſhould keep a great diſtance. But yet ſetting aſide theſe Jewiſh dreams, the man was a wiſe man, and learned, and of great policy, and excellently ſeen in the laws and cuſtoms of that nation. Amongſt other diſcourſes, one day I told him I was much affected with the relation I had from ſome of the company, of their cuſtom in holding the feaſt of the family; for that (methought) I had never heard of a ſolemnity, wherein nature did ſo much preſide. And becauſe propagation of families proceedeth from the nuptial copulation, I deſired to know of him, what laws and cuſtoms they had concerning marriage; and whether they kept marriage well; and whether they were tied to one wife? For that where population is ſo much affected, and ſuch as with them it ſeemed to be, there is commonly permiſſion of plurality of wives. To this he ſaid; you have reaſon for to commend that excellent inſtitution of the feaſt of the family; and indeed we have experience, that thoſe families that are partakers of the bleſſings of that feaſt, do flouriſh and proſper ever after in an extraordinary manner. But hear me now, and I will tell you what I know. You ſhall underſtand, that there is not under the heavens ſo chaſte a nation as this of *Benſalem*; nor ſo free from all pollution or foulneſs. It is the virgin of the world. I remember I have read in one of your *European* books, of an holy hermit amongſt you, that deſired to ſee the ſpirit of fornication; and there appeared to him a little foul ugly *Aethiope:* but if he had deſired to ſee the ſpirit of chaſtity of *Benſalem*, it would have appeared to him in the likeneſs of a fair beautiful cherubim. For there is nothing amongſt mortal men more fair and admirable, than the chaſte minds of this people. Know therefore that with them there are no ſtews, no diſſolute houſes, no curteſans, nor any thing of that kind. Nay, they wonder (with deteſtation) at you in *Europe*, which permit ſuch things. They ſay, ye have put marriage out of office: for marriage is ordained a remedy for unlawful concupiſcence; and natural concupiſcence ſeemeth as a ſpur to marriage. But when men have at hand a remedy more agreeable to their corrupt will, marriage is almoſt expulſed. And therefore there are with you ſeen infinite men that marry not, but chuſe rather a libertine and impure ſingle life, than to be yoked in marriage; and many that do marry, marry late, when the prime and ſtrength of their years is paſt. And when they do marry, what is marriage to them but a very bargain; wherein is ſought alliance, or portion, or reputation, with ſome deſire (almoſt indifferent) of iſſue; and not the faithful nuptial union of man and wife, that was firſt inſtituted. Neither is it poſſible, that thoſe that have caſt away ſo baſely ſo much of their ſtrength, ſhould greatly eſteem children, (being of the ſame matter) as chaſte men do. So likewiſe during marriage is the caſe much amended, as it ought to be if thoſe things were tolerated only for neceſſity; no, but they remain ſtill as a very affront to marriage. The haunting of thoſe diſſolute places, or reſort to curteſans, are no more puniſhed in married men than in batchelors. And the depraved cuſtom of change, and the delight in meretricious imbracements, (where ſin is turned into art) maketh marriage a dull thing, and a kind of impoſition or tax. They hear you defend theſe things, as done to avoid greater evils; as advoutries, deflouring of virgins, unnatural luſt, and the like. But they ſay, this is a prepoſterous wiſdom; and they call it *Lot*'s offer, who to ſave his gueſts from abuſing, offered his daughters: nay, they ſay farther, that there

there is little gained in this; for that the ſame vices and appetites do ſtill remain and abound; unlawful luſt being like a furnace, that if you ſtop the flames altogether it will quench; but if you give it any vent, it will rage; as for maſculine love, they have no touch of it; and yet there are not ſo faithful and inviolate friendſhips in the world again as are there; and to ſpeak generally, (as I ſaid before) I have not read of any ſuch chaſtity in any people as theirs. And their uſual ſaying is, that whoſoever is unchaſte cannot reverence himſelf: and they ſay, that the reverence of a man's ſelf, is, next religion, the chiefeſt bridle of all vices. And when he had ſaid this, the good Jew pauſed a little; whereupon I far more willing to hear him ſpeak on, than to ſpeak my ſelf; yet thinking it decent, that upon his pauſe of ſpeech I ſhould not be altogether ſilent, ſaid only this; that I would ſay to him, as the widow of *Sarepta* ſaid to *Elias*; that he was come to bring to memory our ſins; and that I confeſs the righteouſneſs of *Benſalem*, was greater than the righteouſneſs of *Europe*. At which ſpeech he bowed his head, and went on in this manner: they have alſo many wiſe and excellent laws touching marriage. They allow no polygamy. They have ordained that none do inter-marry, or contract, until a month be paſt from their firſt interview. Marriage without conſent of parents they do not make void, but they mulct it in the inheritors: for the children of ſuch marriages are not admitted to inherit above a third part of their parents inheritance. I have read in a book of one of your men, of a feigned commonwealth, where the married couple are permitted, before they contract, to ſee one another naked. This they diſlike; for they think it a ſcorn to give a refuſal after ſo familiar knowledge: but becauſe of many hidden defects in men and womens bodies, they have a more civil way: for they have near every town a couple of pools, (which they call *Adam* and *Eve*'s pools) where it is permitted to one of the friends of the man, and another of the friends of the woman, to ſee them ſeverally bathe naked.

And as we were thus in conference, there came one that ſeemed to be a meſſenger, in a rich huke, that ſpake with the Jew: whereupon he turned to me and ſaid; you will pardon me, for I am commanded away in haſte. The next morning he came to me again joyful, as it ſeemed, and ſaid; there is word come to the governour of the city, that one of the fathers of *Solomon*'s houſe will be here this day ſeven-night: we have ſeen none of them this dozen years. His coming is in ſtate; but the cauſe of his coming is ſecret. I will provide you, and your fellows, of a good ſtanding to ſee his entry. I thanked him, and told him, I was moſt glad of the news. The day being come, he made his entry. He was a man of middle ſtature and age, comely of perſon, and had an aſpect as if he pitied men. He was cloathed in a robe of fine black cloath, with wide ſleeves and a cape. His under garment was of excellent white linen down to the foot, girt with a girdle of the ſame; and a ſindon or tippet of the ſame about his neck. He had gloves that were curious, and ſet with ſtone; and ſhoes of peach-coloured velvet. His neck was bare to the ſhoulders. His hat was like a helmet, or *Spaniſh Montera*; and his locks curled below it decently: they were of colour brown. His beard was cut round, and of the ſame colour with his hair ſomewhat lighter. He was carried in a rich chariot without wheels litter-wiſe, with two horſes at either end, richly trapped in blue velvet embroidered; and two footmen on each ſide in the like attire. The chariot was all of cedar, gilt and adorned

with cryſtal; ſave that the fore-end had pannels of ſapphires, ſet in borders of gold, and the hinder-end the like of emeralds of the *Peru* colour. There was alſo a ſun of gold, radiant upon the top, in the midſt; and on the top before a ſmall cherub of gold, with wings diſplayed. The chariot was covered with cloth of gold tiſſued upon blue. He had before him fifty attendants, young men all, in white ſatten looſe coats to the mid-leg, and ſtockings of white ſilk; and ſhoes of blue velvet; and hats of blue velvet; with fine plumes of diverſe colours, ſet round like hat-bands. Next before the chariot went two men bare-headed, in linen garments down to the foot, girt, and ſhoes of blue velvet, who carried the one a croſier, the other a paſtoral ſtaff, like a ſheep-hook; neither of them of metal, but the croſier of balm wood, the paſtoral ſtaff of cedar. Horſemen he had none, neither before nor behind his chariot: as it ſeemeth, to avoid all tumult and trouble. Behind his chariot went all the officers and principals of the companies of the city. He ſat alone, upon cuſhions of a kind of excellent pluſh, blue; and under his foot curious carpets of ſilk of divers colours, like the *Perſian*, but far finer. He held up his bare hand as he went, as bleſſing the people, but in ſilence. The ſtreet was wonderfully well kept; ſo that there was never any army had their men ſtand in better battle-array, than the people ſtood. The windows likewiſe were not crouded, but every one ſtood in them as if they had been placed. When the ſhew was paſt, the Jew ſaid to me; I ſhall not be able to attend you as I would, in regard of ſome charge the city hath laid upon me, for the entertaining of this great perſon. Three days after the Jew came to me again, and ſaid: Ye are happy men; for the father of *Solomon*'s houſe taketh knowledge of your being here, and commanded me to tell you, that he will admit all your company to his preſence, and have private conference with one of you that ye ſhall chuſe: and for this hath appointed the next day after to-morrow. And becauſe he meaneth to give you his bleſſing, he hath appointed it in the forenoon. We came at our day and hour, and I was choſen by my fellows for the private acceſs. We found him in a fair chamber richly hanged, and carpeted under foot, without any degrees to the ſtate; he was ſet upon a low throne richly adorned, and a rich cloth of ſtate over his head, of blue ſatten embroidered. He was alone, ſave that he had two pages of honour, on either hand one, finely attired in white. His under garments were the like that we ſaw him wear in the chariot; but inſtead of his gown, he had on him a mantle with a cape, of the ſame fine black, faſtned about him. When we came in, as we were taught, we bowed low at our firſt entrance; and when we were come near his chair, he ſtood up, holding forth his hand ungloved, and in poſture of bleſſing; and we every one of us ſtooped down, and kiſſed the hem of his tippet. That done, the reſt departed, and I remained. Then he warned the pages forth of the room, and cauſed me to ſit down beſide him, and ſpake to me thus in the *Spaniſh* tongue.

God bleſs thee, my ſon; I will give thee the greateſt jewel I have. For I will impart unto thee, for the love of God and men, a relation of the true ſtate of *Solomon*'s houſe. Son, to make you know the true ſtate of *Solomon*'s houſe, I will keep this order. Firſt, I will ſet forth unto you the end of our foundation. Secondly, the preparations and inſtruments we have for our works. Thirdly, the ſeveral employments and functions whereto our fellows are aſſigned. And fourthly, the ordinances and rites which we obſerve.

The end of our foundation is the knowledge of cauſes, and ſecret motions of things; and the enlarging of the bounds of humane empire, to the effecting of all things poſſible.

The preparations and inſtruments are theſe. We have large and deep caves of ſeveral depths: the deepeſt are ſunk ſix hundred fathom; and ſome of them are digged and made under great hills and mountains: ſo that if you reckon together the depth of the hill, and the depth of the cave, they are (ſome of them) above three miles deep. For we find that the depth of an hill, and the depth of a cave from the flat, is the ſame thing; both remote alike from the ſun and heavens beams, and from the open air. Theſe caves we call the lower region. And we uſe them for all coagulations, indurations, refrigerations, and conſervations, of bodies. We uſe them likewiſe for the imitation of natural mines: and the producing alſo of new artificial metals, by compoſitions and materials which we uſe and lay there for many years. We uſe them alſo ſometimes (which may ſeem ſtrange) for curing of ſome diſeaſes, and for prolongation of life, in ſome hermits that chuſe to live there, well accommodated of all things neceſſary, and indeed live very long; by whom alſo we learn many things.

We have burials in ſeveral earths, where we put divers cements, as the *Chineſes* do their porcellane. But we have them in greater variety, and ſome of them more fine. We alſo have great variety of compoſts, and ſoils, for the making of the earth fruitful.

We have high towers; the higheſt about half a mile in height; and ſome of them likewiſe ſet upon high mountains: ſo that the vantage of the hill with the tower, is in the higheſt of them three miles at leaſt. And theſe places we call the upper region; accounting the air between the high places and the low, as a middle region. We uſe theſe towers, according to their ſeveral heights and ſituations, for inſolation, refrigeration, conſervation, and for the view of divers meteors; as winds, rain, ſnow, hail, and ſome of the fiery meteors alſo. And upon them, in ſome places, are dwellings of hermits, whom we viſit ſometimes, and inſtruct what to obſerve.

We have great lakes both ſalt and freſh, whereof we have uſe for the fiſh and fowl. We uſe them alſo for burials of ſome natural bodies: for we find a difference in things buried in earth, or in air below the earth; and things buried in water. We have alſo pools, of which ſome do ſtrain freſh water out of ſalt; and others by art do turn freſh water into ſalt. We have alſo ſome rocks in the midſt of the ſea; and ſome bays upon the ſhore for ſome works, wherein is required the air and vapour of the ſea. We have likewiſe violent ſtreams and cataracts, which ſerve us for many motions: and likewiſe engines for multiplying and enforcing of winds, to ſet alſo on going divers motions.

We have alſo a number of artificial wells and fountains, made in imitation of the natural ſources and baths; as tincted upon vitriol, ſulphur, ſteel, braſs, lead, nitre, and other minerals. And again, we have little wells for infuſions of many things, where the waters take the virtue quicker and better, than in veſſels or baſins. And amongſt them we have a water, which we call water of paradiſe, being, by that we do to it, made very ſovereign for health, and prolongation of life.

We have alſo great and ſpacious houſes, where we imitate and demonſtrate meteors; as ſnow, hail, rain, ſome artificial rains of bodies, and not of water, thunders, lightenings; alſo generations of bodies in air; as frogs, flies, and divers others.

We

We have alſo certain chambers, which we call chambers of health, where we qualify the air as we think good and proper for the cure of divers diſeaſes, and preſervation of health.

We have alſo fair and large baths, of ſeveral mixtures, for the cure of diſeaſes, and the reſtoring of man's body from arefaction: and others, for the confirming of it in ſtrength of ſinews, vital parts, and the very juice and ſubſtance of the body.

We have alſo large and various orchards and gardens, wherein we do not ſo much reſpect beauty, as variety of ground and ſoil, proper for divers trees and herbs: and ſome very ſpacious, where trees and berries are ſet, whereof we make divers kinds of drinks, beſides the vineyards. In theſe we practiſe likewiſe all concluſions of grafting and inoculating, as well of wild trees as fruit trees, which produceth many effects. And we make (by art) in the ſame orchards and gardens, trees and flowers, to come earlier or later than their ſeaſons; and to come up and bear more ſpeedily, than by their natural courſe they do. We make them alſo by art greater much than their nature; and their fruit greater, and ſweeter, and of differing taſte, ſmell, colour, and figure, from their nature. And many of them we ſo order, as that they become of medicinal uſe.

We have alſo means to make divers plants riſe by mixtures of earths without ſeeds; and likewiſe to make divers new plants, differing from the vulgar; and to make one tree or plant turn into another.

We have alſo parks and encloſures of all ſorts of beaſts and birds, which we uſe not only for view or rareneſs, but likewiſe for diſſections and trials; that thereby may take light, what may be wrought upon the body of man. Wherein we find many ſtrange effects; as continuing life in them, though divers parts, which you account vital, be periſhed, and taken forth; reſuſcitating of ſome that ſeem dead in appearance; and the like. We try alſo all poiſons, and other medicines upon them, as well of chirurgery as phyſick. By art likewiſe, we make them greater or taller, than their kind is; and contrariwiſe dwarf them, and ſtay their growth: we make them more fruitful and bearing than their kind is; and contrariwiſe barren, and not generative. Alſo we make them differ in colour, ſhape, activity, many ways. We find means to make commixtures and copulations of divers kinds, which have produced many new kinds, and them not barren, as the general opinion is. We make a number of kinds of ſerpents, worms, flies, fiſhes, of putrefaction; whereof ſome are advanced (in effect) to be perfect creatures, like beaſts, or birds; and have ſexes, and do propagate. Neither do we this by chance, but we know before-hand, of what matter and commixture, what kind of thoſe creatures, will ariſe.

We have alſo particular pools, where we make trials upon fiſhes, as we have ſaid before of beaſts and birds.

We have alſo places for breed and generation of thoſe kinds of worms, and flies, which are of ſpecial uſe; ſuch as are with you your ſilk-worms and bees.

I will not hold you long with recounting of our brew-houſes, bake-houſes and kitchens, where are made divers drinks, breads and meats, rare, and of ſpecial effects. Wines we have of grapes; and drinks of other juice, of fruits, of grains, and roots; and of mixtures with honey, ſugar, manna, and fruits dryed and decocted. Alſo of the tears or wounding of trees, and of the pulp of canes. And theſe drinks are of ſeveral ages, ſome to the age or laſt of forty years. We have drinks alſo brewed with ſeveral herbs,

and

and roots, and ſpices; yea, with ſeveral fleſhes, and white-meats; whereof ſome of the drinks are ſuch as they are in effect meat and drink both: ſo that divers, eſpecially in age, do deſire to live with them, with little or no meat, or bread. And above all, we ſtrive to have drinks of extreme thin parts; to inſinuate into the body, and yet without all biting, ſharpneſs, or fretting; inſomuch as ſome of them put upon the back of your hand, will, with a little ſtay, paſs through to the palm, and yet taſte mild to the mouth. We have alſo waters which we ripen in that faſhion, as they become nouriſhing; ſo that they are indeed excellent drink; and many will uſe no other. Breads we have of ſeveral grains, roots, and kernels; yea, and ſome of fleſh, and fiſh, dried; with divers kinds of leavings and ſeaſonings: ſo that ſome do extremely move appetites; ſome do nouriſh ſo, as divers do live of them, without any other meat; who live very long. So for meats, we have ſome of them ſo beaten, and made tender, and mortified, yet without all corrupting, as a weak heat of the ſtomach will turn them into good *chylus*, as well as a ſtrong heat would meat otherwiſe prepared. We have ſome meats alſo, and breads, and drinks, which taken by men, enable them to faſt long after; and ſome other, that uſed make the very fleſh of mens bodies ſenſibly more hard and tough; and their ſtrength far greater, than otherwiſe it would be.

We have diſpenſatories, or ſhops of medicines; wherein you may eaſily think, if we have ſuch variety of plants and living creatures, more than you have in *Europe*, (for we know what you have,) the ſimples, drugs, and ingredients of medicines, muſt likewiſe be in ſo much the greater variety. We have them likewiſe of divers ages, and long fermentations. And for their preparations, we have not only all manner of exquiſite diſtillations and ſeparations, and eſpecially by gentle heats and percolations through divers ſtrainers, yea, and ſubſtances; but alſo exact forms of compoſition, whereby they incorporate almoſt as they were natural ſimples.

We have alſo divers mechanical arts, which you have not; and ſtuffs made by them; as papers, linen, ſilks, tiſſues; dainty works of feathers of wonderful luſtre; excellent dyes, and many others: and ſhops likewiſe as well for ſuch as are not brought into vulgar uſe amongſt us, as for thoſe that are. For you muſt know, that of the things before recited, many of them are grown into uſe throughout the kingdom; but yet, if they did flow from our invention, we have of them alſo for patterns and principals.

We have alſo furnaces of great diverſities, and that keep great diverſity of heats; fierce and quick; ſtrong and conſtant; ſoft and mild; blown, quiet, dry, moiſt; and the like. But above all, we have heats in imitation of the ſun's and heavenly bodies heat, that paſs divers inequalities, and (as it were) orbs, progreſſes and returns, whereby we produce admirable effects. Beſides, we have heats of dungs, and of bellies and maws of living creatures, and of their bloods and bodies; and of hays and herbs laid up moiſt; of lime unquenched; and ſuch like. Inſtruments alſo which generate heat only by motion. And farther, places for ſtrong inſolations: and again, places under the earth, which by nature, or art, yield heat. Theſe divers heats we uſe, as the nature of the operation, which we intend, requireth.

We have alſo perſpective houſes, where we make demonſtrations of all lights and radiations; and of all colours; and out of things uncoloured and tranſparent, we can repreſent unto you all ſeveral colours: not in rain-bows, (as it is in gems and priſms,) but of themſelves ſingle. We repreſent alſo all multiplications of light, which we carry to great diſtance; and make ſo

ſharp,

ſharp, as to diſcern ſmall points and lines: alſo all colorations of light: all deluſions and deceits of the ſight, in figures, magnitudes, motions, colours: all demonſtrations of ſhadows. We find alſo divers means yet unknown to you, of producing of light, originally, from divers bodies. We procure means of ſeeing objects afar off; as in the heaven, and remote places; and repreſent things near as far off; and things afar off as near; making feigned diſtances. We have alſo helps for the ſight, far above ſpectacles and glaſſes in uſe. We have alſo glaſſes and means, to ſee ſmall and minute bodies, perfectly and diſtinctly; as the ſhapes and colours of ſmall flies and worms, grains, and flaws in gems, which cannot otherwiſe be ſeen; obſervations in urine and blood, not otherwiſe to be ſeen. We make artificial rain-bows, halo's, and circles about light. We repreſent alſo all manner of reflexions, refractions, and multiplications of viſual beams of objects.

We have alſo precious ſtones of all kinds, many of them of great beauty, and to you unknown; cryſtals likewiſe; and glaſſes of divers kinds; and amongſt them ſome of metals vitrificated, and other materials, beſides thoſe of which you make glaſs. Alſo a number of foſſils, and imperfect minerals, which you have not. Likewiſe load-ſtones of prodigious virtue; and other rare ſtones, both natural and artificial.

We have alſo ſound-houſes, where we practiſe and demonſtrate all ſounds, and their generation. We have harmonies which you have not, of quarter-ſounds, and leſſer ſlides of ſounds. Divers inſtruments of muſick likewiſe to you unknown, ſome ſweeter than any you have; together with bells and rings that are dainty and ſweet. We repreſent ſmall ſounds as great and deep; likewiſe great ſounds, extenuate and ſharp; we make divers tremblings and warblings of ſounds, which in their original are entire. We repreſent and imitate all articulate ſounds and letters, and the voices and notes of beaſts and birds. We have certain helps, which ſet to the ear do further the hearing greatly. We have alſo divers ſtrange and artificial echoes, reflecting the voice many times, and as it were toſſing it: and ſome that give back the voice louder than it came, ſome ſhriller, and ſome deeper; yea, ſome rendering the voice, differing in the letters or articulate ſound, from that they receive. We have alſo means to convey ſounds in trunks and pipes, in ſtrange lines and diſtances.

We have alſo perfume-houſes, wherewith we join alſo practices of taſte. We multiply ſmells, which may ſeem ſtrange. We imitate ſmells, making all ſmells to breathe out of other mixtures than thoſe that give them. We make divers imitations of taſte likewiſe, ſo that they will deceive any man's taſte. And in this houſe we contain alſo a confiture houſe; where we make all ſweet-meats, dry and moiſt; and divers pleaſant wines, milks, broths, and ſallads, far in greater variety than you have.

We have alſo engine-houſes, where are prepared engines and inſtruments for all ſorts of motions. There we imitate and practiſe to make ſwifter motions than any you have, either out of your muſkets, or any engine that you have; and to make them, and multiply them more eaſily, and with ſmall force, by wheels, and other means: and to make them ſtronger and more violent than yours are; exceeding your greateſt cannons and baſiliſks. We repreſent alſo ordnance and inſtruments of war, and engines of all kinds: and likewiſe new mixtures and compoſitions of gun-powder, wild-fires burning in water, and unquenchable. Alſo fire-works of all variety both for pleaſure and uſe. We imitate alſo flights of birds; we have ſome degrees of flying in the air; we have ſhips and boats for going

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ing under water, and brooking of ſeas; alſo ſwimming-girdles and ſupporters. We have divers curious clocks, and other like motions of return, and ſome perpetual motions: we imitate alſo motions of living creatures, by images of men, beaſts, birds, fiſhes, and ſerpents; we have alſo a great number of other various motions, ſtrange for equality, fineneſs, and ſubtilty.

We have alſo a mathematical houſe, where are repreſented all inſtruments, as well of geometry as aſtronomy, exquiſitely made.

We have alſo houſes of deceits of the ſenſes; where we repreſent all manner of feats of jugling, falſe apparitions, impoſtures, and illuſions; and their fallacies. And ſurely you will eaſily believe, that we that have ſo many things truly natural, which induce admiration, could in a world of particulars deceive the ſenſes, if we would diſguiſe thoſe things, and labour to make them ſeem more miraculous. But we do hate all impoſtures and lyes: inſomuch as we have ſeverely forbidden it to all our fellows, under pain of ignominy and fines, that they do not ſhew any natural work or thing, adorned or ſwelling; but only pure as it is, and without all affectation of ſtrangeneſs.

These are (my ſon) the riches of *Solomon*'s houſe.

For the ſeveral employments and offices of our fellows; we have twelve that ſail into foreign countries, under the names of other nations, (for our own we conceal;) who bring us the books, and abſtracts, and patterns of experiments of all other parts. Theſe we call merchants of light.

We have three that collect the experiments which are in all books; theſe we call depredators.

We have three that collect the experiments of all mechanical arts; and alſo of liberal ſciences; and alſo of practices which are not brought into arts. Theſe we call myſtery men.

We have three that try new experiments. Such as themſelves think good. Theſe we call pioneers or miners.

We have three that draw the experiments of the former four into titles, and tables, to give the better light for the drawing of obſervations and axioms out of them. Theſe we call compilers.

We have three that bend themſelves, looking into the experiments of their fellows, and caſt about how to draw out of them things of uſe and practice for man's life and knowledge, as well for works, as for plain demonſtration of cauſes, means of natural divinations, and the eaſy and clear diſcovery of the virtues and parts of bodies. Theſe we call dowry-men or benefactors.

Then after divers meetings and conſults of our whole number, to conſider of the former labours and collections, we have three that take care, out of them, to direct new experiments, of a higher light, more penetrating into nature than the former. Theſe we call lamps.

We have three others that do execute the experiments ſo directed, and report them. Theſe we call inoculators.

Lastly, we have three that raiſe the former diſcoveries by experiments, into greater obſervations, axioms, and aphoriſms. Theſe we call interpreters of nature.

We have alſo, as you muſt think, novices and apprentices, that the ſucceſſion of the former employed men do not fail; beſides a great number of ſervants and attendants, men and women. And this we do alſo: we

have conſultations, which of the inventions and experiences which we have diſcovered, ſhall be publiſhed, and which not: and take all an oath of ſecrecy, for the concealing of thoſe which we think fit to keep ſecret: though ſome of thoſe we do reveal ſometimes to the ſtate, and ſome not.

For our ordinances and rites: we have two very long and fair galleries: in one of theſe we place patterns and ſamples of all manner of the more rare and excellent inventions: in the other we place the ſtatues of all principal inventors. There we have the ſtatue of your *Columbus*, that diſcovered the *Weſt-Indies*: alſo the inventor of ſhips: your monk that was the inventor of ordnance, and of gun-powder: the inventor of muſick: the inventor of letters: the inventor of printing: the inventor of obſervations of aſtronomy: the inventor of works in metal: the inventor of glaſs: the inventor of ſilk of the worm: the inventor of wine: the inventor of corn and bread: the inventor of ſugars: and all theſe by more certain tradition than you have. Then have we divers inventors of our own of excellent works; which ſince you have not ſeen, it were too long to make deſcriptions of them; and beſides, in the right underſtanding of thoſe deſcriptions, you might eaſily err. For upon every invention of value, we erect a ſtatue to the inventor, and give him a liberal and honourable reward. Theſe ſtatues are, ſome of braſs; ſome of marble and touchſtone; ſome of cedar, and other ſpecial woods gilt and adorned; ſome of iron; ſome of ſilver; ſome of gold.

We have certain hymns and ſervices which we ſay daily, of laud and thanks to god for his marvellous works: and forms of prayers, imploring his aid and bleſſing for the illumination of our labours; and the turning of them into good and holy uſes.

Lastly, we have circuits or viſits of divers principal cities of the kingdom; where, as it cometh to paſs, we do publiſh ſuch new profitable inventions as we do think good. And we do alſo declare natural divinations of diſeaſes, plagues, ſwarms of hurtful creatures, ſcarcity, tempeſts, earthquakes, great inundations, comets, temperature of the year, and divers other things; and we give counſel thereupon what the people ſhall do for the prevention and remedy of them.

And when he had ſaid this, he ſtood up: and I, as I had been taught, kneeled down; and he laid his right hand upon my head, and ſaid; God bleſs thee, my ſon, and God bleſs this relation which I have made. I give thee leave to publiſh it for the good of other nations; for we here are in God's boſom, a land unknown. And ſo he left me; having aſſigned a value of about two thouſand ducats, for a bounty to me and my fellows. For they give great largeſſes where they come upon all occaſions.

*The reſt was not perfected.*

*Magnalia*

# *Magnalia naturae, praecipue quoad uſus humanos.*

THE prolongation of life: the reſtitution of youth in ſome degree: the retardation of age: the curing of diſeaſes counted incurable: the mitigation of pain: more eaſy and leſs loathſome purgings: the increaſing of ſtrength and activity: the increaſing of ability to ſuffer torture or pain: the altering of complexions: and fatneſs and leanneſs: the altering of ſtatures: the altering of features: the increaſing and exalting of the intellectual parts: verſions of bodies into other bodies: making of new ſpecies: tranſplanting of one ſpecies into another: inſtruments of deſtruction, as of war and poiſon: exhilaration of the ſpirits, and putting them in good diſpoſition: force of the imagination, either upon another body, or upon the body it ſelf: acceleration of time in maturations: acceleration of time in clarifications: acceleration of putrefaction: acceleration of decoction: acceleration of germination: making rich compoſts for the earth: impreſſions of the air, and raiſing of tempeſts: great alteration; as in induration, emollition, *&c.* turning crude and watry ſubſtances into oily and unctuous ſubſtances: drawing of new foods out of ſubſtances not now in uſe: making new threads for apparel; and new ſtuffs, ſuch as are paper, glaſs, *&c.* natural divinations: deceptions of the ſenſes: greater pleaſures of the ſenſes: artificial minerals and cements.

A

# COLLECTION

OF

# APOPHTHEGMS

## NEW and OLD.

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## His lordſhip's preface.

JULIUS *Caeſar* did write a collection of apophthegms, as appears in an epiſtle of *Cicero*; ſo did *Macrobius* a conſular man. I need ſay no more for the worth of a writing of that nature. It is pity *Caeſar*'s book is loſt: for I imagine they were collected with judgment and choice; whereas that of *Plutarch* and *Stobaeus*, and much more the modern ones, draw much of the dregs. Certainly they are of excellent uſe. They are *mucrones verborum*, pointed ſpeeches. *The words of the wiſe are as goads*, ſaith *Solomon*. *Cicero* prettily calleth them *ſalinas*, ſalt-pits, that you may extract ſalt out of, and ſprinkle it where you will. They ſerve to be interlaced in continued ſpeech. They ſerve to be recited upon occaſion of themſelves. They ſerve if you take out the kernel of them, and make them your own. I have for my recreation amongſt more ſerious ſtudies, collected ſome few of them (*a*): therein fanning the old, not omitting any, becauſe they are vulgar, (for many vulgar ones are excellent good;) nor for the meanneſs of the perſon, but becauſe they are dull and flat; and adding many new, that otherwiſe would have died.

(*a*) This collection his lordſhip made out of his memory, without turning any book.

A

# COLLECTION

OF

# APOPHTHEGMS

## NEW and OLD.

1. QUEEN *Elizabeth*, the morrow of her coronation, (it being the cuſtom to releaſe priſoners, at the inauguration of a prince,) went to the chapel; and in the great chamber, one of her courtiers, who was well known to her, either out of his own motion, or by the inſtigation of a wiſer man, preſented her with a petition; and before a great number of courtiers, beſought her with a loud voice, that now this good time, there might be four or five principal priſoners more releaſed: thoſe were the four evangeliſts and the apoſtle St. *Paul*, who had been long ſhut up in an unknown tongue, as it were in priſon; ſo as they could not converſe with the common people. The Queen anſwered very gravely, that it was beſt firſt to enquire of them, whether they would be releaſed or no.

2. QUEEN *Ann Bullen*, at the time when ſhe was led to be beheaded in the *Tower*, called one of the king's privy chamber to her, and ſaid unto him, commend me to the king, and tell him, that he hath been ever conſtant in his courſe of advancing me; from a private gentlewoman he made me a marchioneſs; and from a marchioneſs a queen; and now, that he hath left no higher degree of earthly honour, he intends to crown my innocency with the glory of martyrdom.

3. HIS majeſty *James* the firſt, king of *Great Britain*, having made unto his parliament an excellent and large declaration, concluded thus; I have now given you a clear mirrour of my mind; uſe it therefore like a mirrour, and take heed how you let it fall, or how you ſoil it with your breath.

4. A great officer in *France* was in danger to have loſt his place; but his wife, by her ſuit and means making, made his peace; whereupon a pleaſant fellow ſaid, that he had been cruſh'd, but that he ſaved himſelf upon his horns.

5. HIS majeſty ſaid to his parliament at another time, finding there were ſome cauſeleſs jealouſies ſown amongſt them; that the king and his people, (whereof the parliament is the repreſentative body,) were as huſband and wife; and therefore, that of all other things, jealouſy was between them moſt pernicious.

6. His

6. His majeſty, when he thought his council might note in him ſome variety in buſineſſes, though indeed he remained conſtant, would ſay, that the ſun many times ſhineth watery; but it is not the ſun which cauſeth it, but ſome cloud riſing betwixt us and the ſun: and when that is ſcattered, the ſun is as it was, and comes to his former brightneſs.

7. His majeſty, in his anſwer to the book of the cardinal of *Evereux*, (who had in a grave argument of divinity, ſprinkled many witty ornaments of poeſy and humanity,) ſaith; that theſe flowers were like blue, and yellow, and red flowers in the corn, which make a pleaſant ſhew to thoſe that look on, but they hurt the corn.

8. Sir *Edward Coke* being vehement againſt the two provincial counſels of *Wales*, and the north, ſaid to the king; there was nothing there but a kind of confuſion and hotch-potch of juſtice: one while they were a ſtar-chamber; another while a king's-bench; another, a common-pleas: another, a commiſſion of oyer and terminer. His majeſty anſwered; why, ſir *Edward Coke*, they be like houſes in progreſs, where I have not, nor can have, ſuch diſtinct rooms of ſtate, as I have here at *Whitehall*, or at *Hampton-court*.

9. The commiſſioners of the treaſury moved the King for the relief of his eſtate, to diſafforeſt ſome foreſts of his, explaining themſelves of ſuch foreſts as lay out of the way, not near any of the king's houſes, nor in the courſe of his progreſs; whereof he ſhould never have uſe nor pleaſure. Why, (ſaith the king,) do you think that *Solomon* had uſe and pleaſure of all his three hundred concubines?

10. His majeſty, when the committees of both houſes of parliament preſented unto him the inſtrument of union of *England* and *Scotland*, was merry with them; and amongſt other pleaſant ſpeeches, ſhewed unto them the laird of *Lawreſton* a *Scotchman*, who was the talleſt and greateſt man that was to be ſeen, and ſaid; well, now we are all one, yet none of you will ſay, but here is one *Scotchman* greater than any *Engliſhman*, which was an ambiguous ſpeech; but it was thought he meant it of himſelf.

11. His majeſty would ſay to the lords of his council when they ſate upon any great matter, and came from council in to him, well, you have ſet, but what have you hatched?

12. When the arch-duke did raiſe his ſiege from the *Grave*, the then ſecretary came to queen *Elizabeth*. The queen (having firſt intelligence thereof,) ſaid to the ſecretary, wote you what? The arch-duke is riſen from the grave. He anſwered; what, without the trumpet of the arch-angel? The queen replied, yes; without the ſound of trumpet.

13. Queen *Elizabeth* was importuned much by my lord of *Eſſex*, to ſupply divers great offices that had been long void: the queen anſwered nothing to the matter; but roſe up on the ſudden, and ſaid; I am ſure my office will not be long void. And yet at that time there was much ſpeech of troubles, and diviſions about the crown, to be after her deceaſe: but they all vaniſhed; and king *James* came in, in a profound peace.

14. The council did make remonſtrance unto queen *Elizabeth*, of the continual conſpiracies againſt her life; and namely, that a man was lately taken, who ſtood ready in a very dangerous and ſuſpicious manner to do the deed: and they ſhewed her the weapon, wherewith he thought to have acted it. And therefore they adviſed her, that ſhe ſhould go leſs abroad to take the air, weakly attended, as ſhe uſed. But the queen anſwered; that ſhe had rather be dead, than put in cuſtody.

15. The

15. The lady *Paget*, that was very private with queen *Elizabeth*, declared herſelf much againſt the match with monſieur. After monſieur's death, the queen took extreme grief, (at leaſt as ſhe made ſhew) and kept in within her bed-chamber, and one ante-chamber for three weeks ſpace, in token of mourning: at laſt ſhe came forth into the privy-chamber, and admitted her ladies to have acceſs unto her; and amongſt the reſt, my lady *Paget* preſented herſelf, and came to her with a ſmiling countenance. The queen bent her brows, and ſeemed to be highly diſpleaſed, and ſaid to her; madam, you are not ignorant of my extreme grief, and do you come to me with a countenance of joy? My lady *Paget* anſwered; alas, if it pleaſe your majeſty, it is impoſſible for me to be abſent from you three weeks, but that when I ſee you, I muſt look chearfully. No, no, (ſaid the queen, not forgetting her former averſeneſs to the match) you have ſome other conceit in it, tell me plainly. My lady anſwered, I muſt obey you; it is this. I was thinking how happy your majeſty was, you married not monſieur; for ſeeing you take ſuch thought for his death, being but your friend; if he had been your huſband, ſure it would have coſt you your life.

16. Henry the fourth of *France* his queen was young with child; count *Soiſſons*, that had his expectation upon the crown, when it was twice or thrice thought that the queen was with child before, ſaid to ſome of his friends, that it was but with a pillow. This had ſome ways come to the king's ear; who kept it till ſuch time as the queen waxed great: then he called the count of *Soiſſons* to him, and ſaid, laying his hand upon the queen's belly; come couſin, is this a pillow? The count of *Soiſſons* anſwered; yes, ſir, it is a pillow for all *France* to ſleep upon.

17. King *Henry* the fourth of *France* was ſo punctual of his word, after it was once paſſed, that they called him the king of the faith.

18. The ſaid king *Henry* the fourth was moved by his parliament to a war againſt the proteſtants: he anſwered, yes, I mean it; I will make every one of you captains; you ſhall have companies aſſigned you. The parliament obſerving whereunto his ſpeech tended, gave over, and deſerted his motion.

19. Queen *Elizabeth* was wont to ſay, upon the commiſſion of ſales, that the commiſſioners uſed her like ſtrawberry-wives, that layed two or three great ſtrawberries at the mouth of their pot, and all the reſt were little ones; ſo they made her two or three good prizes of the firſt particulars, but fell ſtraightways.

20. Queen *Elizabeth* uſed to ſay of her inſtructions to great officers, that they were like to garments, ſtrait at the firſt putting on, but did by and by wear looſe enough.

21. A great officer at court, when my lord of *Eſſex* was firſt in trouble; and that he, and thoſe that dealt for him, would talk much of my lord's friends, and of his enemies, anſwer'd to one of them; I will tell you, I know but one friend and one enemy my lord hath; and that one friend is the queen, and that one enemy is himſelf.

22. The book of depoſing king *Richard* the ſecond, and the coming in of *Henry* the fourth, ſuppoſed to be written by doctor *Hayward*, who was committed to the *Tower* for it, had much incenſed queen *Elizabeth*; and ſhe aſked Mr. *Bacon*, being then of her council learned, whether there were any treaſon contained in it? Who intending to do him a pleaſure, and to take off the queen's bitterneſs with a merry conceit, anſwered; no, madam, for treaſon I cannot deliver opinion that there is any, but very much felony: the queen

queen apprehending it gladly, aſked, how? and wherein? Mr. *Bacon* anſwered, becauſe he had ſtolen many of his ſentences and conceits out of *Cornelius Tacitus*.

23. QUEEN *Elizabeth* being to reſolve upon a great officer, and being by ſome, that canvaſſed for others, put in ſome doubt of that perſon, whom ſhe meant to advance, called for Mr. *Bacon*; and told him, ſhe was like one with a lanthorn ſeeking a man, and ſeemed unſatisfied in the choice ſhe had of a man for that place. Mr. *Bacon* anſwered her, that he had heard that in old time, there was uſually painted on the church walls the day of doom, and God ſitting in judgment, and ſaint *Michael* by him, with a pair of balances; and the ſoul, and the good deeds in the one balance; and the faults, and the evil deeds in the other: and the ſoul's balance went up far too light. Then was our lady painted with a great pair of beads, who caſt them into the light balance, and brought down the ſcale: ſo he ſaid; place and authority, which were in her majeſty's hands to give, were like our lady's beads, which though men, through any imperfections, were too light before, yet when they were caſt in, made weight competent.

24. QUEEN *Elizabeth* was dilatory enough in ſuits, of her own nature; and the lord treaſurer *Burleigh* being a wiſe man, and willing therein to feed her humour, would ſay to her; madam, you do well to let ſuitors ſtay; for I ſhall tell you, *bis dat, qui cito dat*; if you grant them ſpeedily, they will come again the ſooner.

25. SIR *Nicolas Bacon*, who was keeper of the great ſeal of *England*, when queen *Elizabeth*, in her progreſs, came to his houſe at *Gorhambury*, and ſaid to him; my lord, what a little houſe have you gotten? anſwered her; madam, my houſe is well, but it is you that have made me too great for my houſe.

26. THERE was a conference in parliament, between the lords houſe, and the houſe of commons, about a bill of accountants, which came down from the lords to the commons; which bill prayed, that the lands of accountants, whereof they were ſeized when they entered upon their office, might be liable to their arrears to the queen. But the commons deſired, that the bill might not look back to accountants that were already, but extend only to accountants hereafter. But the lord treaſurer ſaid; why, I pray you, if you had loſt your purſe by the way, would you look forwards, or would you look back? The queen hath loſt her purſe.

27. THE lord keeper, Sir *Nicolas Bacon*, was aſked his opinion by my lord of *Leiceſter*, concerning two perſons whom the queen ſeemed to think well of: by my troth, my lord, (ſaid he) the one is a grave counſellor; the other is a proper young man; and ſo he will be as long as he lives.

28. MY lord of *Leiceſter*, favourite to queen *Elizabeth*, was making a large chace about *Cornbury* park; meaning to encloſe it with poſts and rails; and one day was caſting up his charge what it would come to. Mr. *Goldingham*, a free ſpoken man, ſtood by, and ſaid to my lord; methinks your lordſhip goeth not the cheapeſt way to work. Why, *Goldingham*, ſaid my lord? Marry, my lord, ſaid *Goldingham*, count you but upon the poſts, for the country will find you railing.

29. THE lord-keeper, Sir *Nicholas Bacon*, was aſked his opinion by queen *Elizabeth*, of one of theſe monopoly licences? And he anſwered, madam, will you have me ſpeak the truth? *Licentia omnes deteriores ſumus:* we are all the worſe for licences.

30. MY

30. My lord of *Eſſex*, at the ſuccour of *Roan*, made twenty four knights, which at that time was a great number. Divers of thoſe gentlemen were of weak and ſmall means; which when queen *Elizabeth* heard, ſhe ſaid; my lord might have done well to have built his alms-houſe, before he made his knights.

31. The deputies of the reformed religion, after the maſſacre which was at *Paris* upon Saint *Bartholomew*'s day, treated with the king and queen-mother, and ſome other of the council, for a peace. Both ſides were agreed upon the articles. The queſtion was, upon the ſecurity for the performance. After ſome particulars propounded and rejected, the queen-mother ſaid, why, is not the word of a king ſufficient ſecurity? One of the deputies anſwered; no, by Saint *Bartholomew*, madam.

32. There was a *French* gentleman, ſpeaking with an *Engliſh*, of the law Salique; that women were excluded from inheriting the crown of *France*. The *Engliſh* ſaid; yes, but that was meant of the women themſelves, not of ſuch males as claimed by women. The *French* gentleman ſaid, where do you find that gloſs? The *Engliſh* anſwered, I'll tell you, Sir, look on the backſide of the record of the law Salique, and there you ſhall find it indorſed: implying, there was no ſuch thing as the law Salique, but that it is a mere fiction.

33. A friar of *France*, being in an earneſt diſpute about the law Salique, would needs prove it by ſcripture; citing that verſe of the goſpel; *lilia agri non laborant, neque nent*; the lilies of the field do neither labour nor ſpin: applying it thus; that the flower-de-luces of *France* cannot deſcend, neither to the diſtaff, nor to the ſpade; that is, not to a woman, nor to a peaſant.

34. When peace was renewed with the *French* in *England*, divers of the great counſellors were preſented from the *French* with jewels: the lord *Henry Howard*, being then earl of *Northampton*, and a counſellor, was omitted. Whereupon the king ſaid to him, my lord, how happens it that you have not a jewel as well as the reſt? My lord anſwered, according to the fable in *AEſop*; *non ſum gallus, itaque non reperi gemmam.*

35. The ſame earl of *Northampton*, then lord privy ſeal, was aſk'd by king *James* openly at the table, where commonly he entertained the king with diſcourſe; the king aſk'd him upon the ſudden; my lord, have you not a deſire to ſee *Rome?* My lord privy ſeal anſwered; yes indeed, Sir. The king ſaid, and why? My lord anſwered; becauſe if it pleaſe your majeſty, it was the ſeat of the greateſt monarchy, and the ſeminary of the braveſt men of the world, whilſt it was heathen: and then, ſecondly, becauſe afterwards it was the ſee of ſo many holy biſhops in the primitive church, moſt of them martyrs. The king would not give it over, but ſaid; and for nothing elſe? My lord anſwered; yes, if it pleaſe your majeſty, for two things more: the one to ſee him, who they ſay hath ſo great a power to forgive other men their ſins, to confeſs his own ſins upon his knees before a chaplain or prieſt: and the other to hear antichriſt ſay his creed.

36. Sir *Nicolas Bacon* being appointed a judge for the northern circuit, and having brought his trials that came before him to ſuch a paſs, as the paſſing of ſentence on malefactors, he was by one of the malefactors mightily importuned for to ſave his life; which when nothing that he had ſaid did avail, he at length deſired his mercy on the account of kindred. Prithee, ſaid my lord judge, how came that in? Why, if it pleaſe you, my lord, your name is *Bacon*, and mine is *Hog*, and in all ages *Hog* and *Bacon* have been

ſo near kindred, that they are not to be ſeparated. Ay, but replied judge *Bacon*, you and I cannot be kindred, except you be hanged; for *Hog* is not *Bacon* until it be well hanged.

37. Two ſcholars and a countrey man travelling upon the road, one night lodged all in one inn, and ſupp'd together, where the ſcholars thought to have put a trick upon the countrey man, which was thus; the ſcholars appointed for ſupper two pigeons, and a fat capon, which being ready, was brought up, and they having ſet down, the one ſcholar took up one pigeon, the other ſcholar took the other pigeon, thinking thereby that the countrey man ſhould have ſate ſtill, until that they were ready for the carving of the capon; which he perceiving, took the capon and laid it on his trencher, and thus ſaid, daintily contrived, every man a bird.

38. JACK *Roberts* was deſired by his taylor, when the reckoning grew ſomewhat high, to have a bill of his hand. *Roberts* ſaid, I am content, but you muſt let no man know it. When the taylor brought in the bill, he tore it as in choler, and ſaid to him, you uſe me not well, you promiſed me that no man ſhould know it, and here you have put in, Be it known unto all men by theſe preſents.

39. SIR *Walter Rawleigh* was wont to ſay of the ladies of queen *Elizabeth*'s privy chamber, and bed chamber, that they were like witches, they could do hurt, but they could do no good.

40. THERE was a miniſter deprived for inconformity, who ſaid to ſome of his friends, that if they deprived him, it ſhould coſt an hundred men's lives. The party underſtood it, as if being a turbulent fellow, he would have moved ſedition, and complained of him; whereupon being convented and oppoſed upon that ſpeech, he ſaid his meaning was, that if he loſt his benefice, he would practiſe phyſick, and then he thought he ſhould kill an hundred men in time.

41. SECRETARY *Bourn*'s ſon kept a gentleman's wife in *Shropſhire*, who lived from her huſband with him; when he was weary of her, he cauſed her huſband to be dealt with to take her home, and offered him five hundred pounds for reparation; the gentleman went to Sir *H. Sidney*, to take his advice upon this offer, telling him, that his wife promiſed now a new life; and to tell him truth, five hundred pounds would come well with him; and beſides that ſometimes he wanted a woman in his bed. By my troth, ſaid Sir *Henry Sidney*, take her home, and take the money; then whereas other cuckolds wear their horns plain, you may wear yours gilt.

42. WHEN *Rabelais*, the great jeſter of *France*, lay on his death-bed, and they gave him the extream unction, a familiar friend of his came to him afterwards, and aſked him how he did? *Rabelais* anſwered, even going my journey, they have greaſed my boots already.

43. MR. *Bromley* ſolicitor, giving in evidence for a deed, which was impeached to be fraudulent, was urged by the counſel on the other ſide with this preſumption, that in two former ſuits when title was made, that deed was paſſed over in ſilence, and ſome other conveyance ſtood upon: Mr. juſtice *Catiline* taking in with that ſide, aſked the ſolicitor, I pray thee, Mr. ſolicitor, let me aſk you a familiar queſtion; I have two geldings in my ſtable; I have divers times buſineſs of importance, and ſtill I ſend forth one of my geldings, and not the other; would you not think I ſet him aſide for a jade? No, my lord, ſaid *Bromley*, I would think you ſpared him for your own ſaddle.

44. THALES, as he looked upon the ſtars, fell into the water; whereupon

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it was after ſaid, that if he had looked into the water he might have ſeen the ſtars, but looking up to the ſtars he could not ſee the water.

45. A man and his wife in bed together, ſhe towards the morning pretended her ſelf to be ill at eaſe, deſiring to lie on her huſband's ſide, ſo the good man to pleaſe her, came over her, making ſome ſhort ſtay in his paſſage over, where ſhe had not long lain, but deſired to lie in her old place again; quoth he, how can it be effected? She anſwered, come over me again. I had rather, ſaid he, go a mile and a half about.

46. A thief being arraigned at the bar for ſtealing a mare, in his pleading urged many things in his own behalf, and at laſt nothing availing, he told the bench, the mare rather ſtole him, than he the mare; which in brief he thus related; that paſſing over ſeveral grounds about his lawful occaſions, he was purſued cloſe by a fierce maſtiff dog, and ſo was forced to ſave himſelf by leaping over a hedge, which being of an agile body he effected; and in leaping, a mare ſtanding on the other ſide of the hedge, leaped upon her back, who running furiouſly away with him, he could not by any means ſtop her, until he came to the next town, in which town the owner of the mare lived, and there was he taken, and here arraigned.

47. Master *Maſon* of *Trinity* college, ſent his pupil to another of the fellows, to borrow a book of him, who told him, I am loth to lend my books out of my chamber, but if it pleaſe thy tutor to come and read upon it in my chamber, he ſhall as long as he will. It was winter, and ſome days after the ſame fellow ſent to Mr. *Maſon* to borrow his bellows; but Mr. *Maſon* ſaid to his pupil, I am loth to lend my bellows out of my chamber, but if thy tutor would come and blow the fire in my chamber, he ſhall as long as he will.

48. A notorious rogue being brought to the bar, and knowing his caſe to be deſperate, inſtead of pleading, he took to himſelf the liberty of jeſting, and thus ſaid, I charge you in the king's name, to ſeize and take away that man (meaning the judge) in the red gown, for I go in danger of my life becauſe of him.

49. In *Flanders*, by accident, a *Flemiſh* tiler fell from the top of a houſe upon a *Spaniard*, and killed him, though he eſcaped himſelf: the next of the blood proſecuted his death with great violence, and when he was offered pecuniary recompence, nothing would ſerve him but *lex talionis*; whereupon the judge ſaid to him, that if he did urge that ſentence, it muſt be, that he ſhould go up to the top of the houſe, and then fall down upon the tiler.

50. A rough-hewn ſeaman, being brought before a wiſe juſt-aſs for ſome miſdemeanour, was by him ſent away to priſon, and being ſomewhat refractory after he heard his doom, inſomuch as he would not ſtir a foot from the place where he ſtood, ſaying, it was better to ſtand where he was, than go to a worſe place: The juſtice thereupon to ſhew the ſtrength of his learning, took him by the ſhoulder, and ſaid, thou ſhalt go *nogus vogus*, inſtead of *nolens volens*.

51. Francis the firſt of *France*, uſed for his pleaſure ſometimes to go diſguiſed: ſo walking one day in the company of the cardinal of *Bourbon* near *Paris*, he met with a peaſant with a new pair of ſhoes upon his arm: ſo he called unto him, and ſaid; by our lady, theſe be good ſhoes, what did they coſt thee? The peaſant ſaid, gueſs; the king ſaid, I think ſome five ſols. Saith the peaſant, you have lyed, but a *carlois*. What, villain, ſaid the

cardinal of *Bourbon*, thou art dead, it is the king. The peaſant replied; the devil take him of you and me, that knew ſo much.

52. THERE was a young man in *Rome*, that was very like *Auguſtus Caeſar*; *Auguſtus* took knowledge of him, and ſent for the man, and aſked him, was your mother never at *Rome?* He anſwered; no, ſir, but my father was.

53. A phyſician adviſed his patient that had ſore eyes, that he ſhould abſtain from wine; but the patient ſaid, I think rather, ſir, from wine and water; for I have often marked it in blue eyes, and I have ſeen water come forth, but never wine.

54. A debauch'd ſeaman being brought before a juſtice of the peace upon the account of ſwearing, was by the juſtice commanded to depoſite his fine in that behalf provided, which was two ſhillings; he thereupon plucking out of his pocket a half crown, aſked the juſtice what was the rate he was to pay for curſing; the juſtice told him, ſix-pence: quoth he then, a pox take you all for a company of knaves and fools, and there's half a crown for you, I will never ſtand changing of money.

55. AUGUSTUS *Caeſar* was invited to ſupper by one of his old friends, that had converſed with him in his leſs fortunes, and had but ordinary entertainment; whereupon at his going away, he ſaid, I did not know that you and I were ſo familiar.

56. AGATHOCLES, after he had taken *Syracuſae*, the men whereof, during the ſiege, had in a bravery ſpoken of him all the villainy that might be, ſold the *Syracuſans* for ſlaves, and ſaid; now if you uſe ſuch words of me, I will tell your maſters of you.

57. DIONYSIUS the elder, when he ſaw his ſon in many things very inordinate, ſaid to him, did you ever know me do ſuch things? His ſon anſwered, no, but you had not a tyrant to your father; the father replied, no, nor you, if you take theſe courſes, will have a tyrant to your ſon.

58. CALLISTHENES the philoſopher, that followed *Alexander*'s court, and hated the king, being aſked by one, how one ſhould become the famouſeſt man in the world, anſwered, by taking away him that is.

59. AGESILAUS, when one told him there was one did excellently counterfeit a nightingale, and would have had him heard him, ſaid; why, I have heard the nightingale herſelf.

60. A great nobleman, upon the complaint of a ſervant of his, laid a citizen by the heels, thinking to bend him to his ſervant's deſire; but the fellow being ſtubborn, the ſervant came to his lord, and told him, your lordſhip I know hath gone as far as well you may, but it works not; for yonder fellow is more perverſe than before. Said my lord, let's forget him a while, and then he will remember himſelf.

61. ONE came to a cardinal in *Rome*, and told him, that he had brought his lordſhip a dainty white palfry, but he fell lame by the way. Saith the cardinal to him, I'll tell thee what thou ſhalt do; go to ſuch a cardinal, and ſuch a cardinal, naming him half a dozen cardinals, and tell them as much; and ſo whereas by thy horſe, if he had been found, thou couldeſt have pleaſed but one, with thy lame horſe thou mayeſt pleaſe half a dozen.

62. A witty rogue coming into a lace-ſhop, ſaid, he had occaſion for ſome lace; choice whereof being ſhewed him, he at laſt pitch'd upon one pattern, and aſked them, how much they would have for ſo much as would reach from ear to ear, for ſo much he had occaſion for. They told him for ſo much: ſo ſome few words paſſing between them, he at laſt agreed, and told down his money

money for it, and began to measure on his own head, thus saying; one ear is here, and the other is nailed to the pillory in *Bristol*, and I fear you have not so much of this lace by you at present as will perfect my bargain: therefore this piece of lace shall suffice at present in part of payment, and provide the rest with all expedition.

63. IPHICRATES the *Athenian*, in a treaty that he had with the *Lacedaemonians* for peace, in which question was about security for observing the same, said; the *Athenians* would not accept of any security, except the *Lacedaemonians* did yield up unto them those things, whereby it might be manifest, that they could not hurt them if they would.

64. EURIPIDES would say of persons that were beautiful, and yet in some years, in fairest bodies not only the spring is pleasant, but also the autumn.

65. THERE was a captain sent to an exploit by his general with forces that were not likely to atchieve the enterprize; the captain said to him, sir, appoint but half so many: why, saith the general? The captain answered; because it is better fewer die than more.

66. THERE was a harbinger who had lodged a gentleman in a very ill room; who expostulated with him somewhat rudely; but the harbinger carelesly said; you will take pleasure in it when you are out of it.

67. THERE is a *Spanish* adage, love without end hath no end; meaning, that if it were begun not upon particular ends it would last.

68. A woman being suspected by her husband for dishonesty, and being by him at last press'd very hard about it, made him quick answer, with many protestations, that she knew no more of what he said, than the man in the moon. Now the captain of the ship called the moon, was the very man she so much loved,

69. DEMOSTHENES when he fled from the battle, and that it was reproached to him, said, that he that flies might fight again.

70. GONSALVO would say, the honour of a soldier ought to be of a strong web; meaning, that it should not be so fine and curious, that every little disgrace should catch and stick in it.

71. AN apprentice of *London* being brought before the chamberlain by his master for the sin of incontinency, even with his own mistress, the chamberlain thereupon gave him many Christian exhortations; and at last he mentioned and press'd the chastity of *Joseph*, when his mistress tempted him with the like crime of incontinency. Ay, sir, said the apprentice; but if *Joseph*'s mistress had been as handsome as mine is, he could not have forborn.

72. BIAS gave in precept, love as if you should hereafter hate; and hate as if you should hereafter love.

73. CINEAS was an excellent orator and statesman, and principal friend and counsellor to *Pyrrhus*; and falling in inward talk with him, and discerning the king's endless ambition; *Pyrrhus* opened himself unto him; that he intended first a war upon *Italy*, and hoped to atchieve it: *Cineas* asked him, sir, what will you do then? Then, saith he, we will attempt *Sicily*: *Cineas* said, well, sir, what then? Said *Pyrrhus*, if the gods favour us, we may conquer *Africa* and *Carthage*. What then, sir, saith *Cineas?* Nay then, saith *Pyrrhus*, we may take our rest, and sacrifice and feast every day, and make merry with our friends. Alas, sir, said *Cineas*, may we not do so now without all this ado?

74. LAMIA

74. LAMIA the courtezan had all power with *Demetrius* king of *Macedon*, and by her inſtigations he did many unjuſt and cruel acts; whereupon *Lyſimachus* ſaid, that it was the firſt time that ever he knew a whore play in a tragedy.

75. ONE of the *Romans* ſaid to his friend, what think you of one who was taken in the act and manner of adultery? The other anſwered, marry, I think he was ſlow at diſpatch.

76. EPAMINONDAS, when his great friend and colleague in war was ſuitor to him to pardon an offender, denied him; afterwards, when a concubine of his made the ſame ſuit, he granted it to her: which when *Pelopidas* ſeemed to take unkindly, he ſaid; ſuch ſuits are to be granted to whores, but not to perſonages of worth.

77. THALES being aſked when a man ſhould marry, ſaid; young men not yet, old men not at all.

78. A company of ſcholars going together to catch conies, carried one ſcholar with them, which had not much more wit than he was born with; and to him they gave in charge, that if he ſaw any, he ſhould be ſilent, for fear of ſcaring of them. But he no ſooner eſpied a company of rabbits before the reſt, but he cryed aloud, *ecce multi cuniculi*, which in *Engliſh* ſignifies, behold many conies; which he had no ſooner ſaid, but the conies ran to their burrows: and he being checked by them for it, anſwered, who the devil would have thought that the rabbits underſtood *Latin?*

79. A *Welchman* being at a ſeſſions-houſe, and ſeeing the priſoners hold up hands at the bar, related to ſome of his acquaintance there, that the judges were good fortune-tellers; for if they did but look upon their hand, they could certainly tell whether they ſhould live or die.

80. SOLON compared the people unto the ſea, and orators and counſellors to the winds; for that the ſea would be calm and quiet, if the winds did not trouble it.

81. SOCRATES was pronounced by the oracle of *Delphos*, to be the wiſeſt man of *Greece*, which he would put from himſelf ironically, ſaying, there would be nothing in him to verify the oracle except this, that he was not wiſe and knew it; and others were not wiſe, and knew it not.

82. SOCRATES, when there was ſhewed him the book of *Heraclitus* the obſcure, and was aſked his opinion of it, anſwered; thoſe things which I underſtood were excellent, I imagine ſo were thoſe I underſtood not; but they require a diver of *Delos*.

83. BION aſked an envious man that was very ſad, what harm had befallen unto him, or what good had befallen unto another man.

84. STILPO the philoſopher, when the people flocked about him, and that one ſaid to him, the people come wondering about you, as if it were to ſee ſome ſtrange beaſt; no, ſaith he, it is to ſee a man which *Diogenes* fought with his lanthorn at noon-day.

85. A man being very jealous of his wife, inſomuch that which way ſoever ſhe went, he would be prying at her heels; and ſhe being ſo grieved thereat, in plain terms told him, that if he did not for the future leave off his proceedings in that nature, ſhe would graft ſuch a pair of horns upon his head, that ſhould hinder him from coming out of any door in the houſe.

86. A citizen of *London* paſſing the ſtreets very haſtily, came at laſt where ſome ſtop was made by carts; and ſome gentlemen talking together, who knew him, where being in ſome paſſion that he could not ſuddenly paſs;

one

one of them in this wiſe ſpoke unto him; that others had paſſed by, and there was room enough, only they could not tell whether their horns were ſo wide as his.

87. A tinker paſſing *Cheapſide* with his uſual tone, have you any work for a tinker? An apprentice ſtanding at a door oppoſite to a pillory there ſet up, called the tinker, with an intent to put a jeſt upon him, and told him, that he ſhould do very well if he would ſtop thoſe two holes in the pillory; to which the tinker anſwered, that if he would but put in his head and ears a while in that pillory, he would beſtow both braſs and nails upon him to hold him in, and give him his labour into the bargain.

88. A young maid having married an old man, was obſerved on the day of marriage to be ſomewhat moody, as if ſhe had eaten a diſh of chums, which one of her bridemen obſerving, bid her be cheary; and told her moreover, that an old horſe would hold out as long, and as well as a young one, in travel. To which ſhe anſwered, ſtroking down her belly with her hand; but not in this road, ſir.

89. THERE was in *Oxford* a cowardly fellow that was a very good archer; he was abuſed groſly by another, and moaned himſelf to ſir *Walter Rawleigh*, then a ſcholar, and aſk'd his advice, what he ſhould do to repair the wrong had been offered him; *Rawleigh* anſwered, why challenge him at a match of ſhooting.

90. WHITEHEAD, a grave divine, was much eſteemed by queen *Elizabeth*, but not preferred, becauſe he was againſt the government of biſhops, he was of a blunt ſtoical nature; he came one day to the queen, and the queen happened to ſay to him, I like thee the better, *Whitehead*, becauſe thou liveſt unmarried. He anſwered, in troth, madam, I like you the worſe for the ſame cauſe.

91. DOCTOR *Laud* ſaid, that ſome hypocrites, and ſeeming mortified men, that held down their heads like bulruſhes, were like the little images that they place in the very bowing of the vaults of churches, that look as if they held up the church, but are but puppets.

92. A nobleman of this nation, famouſly known for his mad tricks, on a time having taken phyſick, which he perceiving that it began well to work, called up his man to go for a chirurgeon preſently, and to bring his inſtruments with him. The chirurgeon comes in all ſpeed; to whom my lord related, that he found himſelf much addicted to women, and therefore it was his will, that the cauſe of it might be taken away, and therefore commanded him forthwith to prepare his inſtruments ready for to geld him: ſo the chirurgeon forthwith prepares accordingly, and my lord told him that he would not ſee it done, and therefore that he ſhould do his work the back way: ſo both parties being contented, my lord makes ready, and holds up his a—; and when he perceives the chirurgeon very near him, he lets fly full in his face; which made the chirurgeon ſtep back, but coming preſently on again; hold, hold, ſaith my lord, I will better conſider of it, for I ſee the retentive faculty is very weak at the approach of ſuch keen inſtruments.

93. THERE was a curſt page that his maſter whipt naked, and when he had been whipt, would not put on his cloaths; and when his maſter bad him, take them you, for they are the hangman's fees.

94. THERE was a lady of the weſt countrey, that gave great entertainment at her houſe to moſt of the gallant gentlemen thereabouts, and amongſt others, ſir *Walter Rawleigh* was one. This lady, though otherwiſe a ſtately dame, was a notable good houſewife; and in the morning betimes,

times, ſhe called to one of her maids that look'd to the ſwine, and aſked, are the pigs ſerved? Sir *Walter Rawleigh*'s chamber was faſt by the lady's, ſo as he heard her; a little before dinner, the lady came down in great ſtate into the great chamber, which was full of gentlemen; and as ſoon as ſir *Walter Rawleigh* ſet eye upon her; Madam, ſaith he, are the pigs ſerved? The lady anſwered; You know beſt whether you have had your breakfaſt.

95. THERE were fiſhermen drawing the river at *Chelſey*: Mr. *Bacon* came thither by chance in the afternoon, and offered to buy their draught: they were willing. He aſked them what they would take? They aſked, thirty ſhillings. Mr. *Bacon* offered them ten. They refuſed it. Why then, ſaith Mr. *Bacon*, I will be only a looker on. They drew and catched nothing. Saith Mr. *Bacon*, Are not you mad fellows now, that might have had an angel in your purſe, to have made merry withal, and to have warmed you throughly, and now you muſt go home with nothing. Ay but, ſaith the fiſhermen, we had hope then to make a better gain of it. Saith Mr. *Bacon*, well my maſter, then I'll tell you, hope is a good breakfaſt, but it is a bad ſupper.

96. A lady walking with Mr. *Bacon* in *Gray's-Inn* walks, aſked him, whoſe that piece of ground lying next under the walls was? He anſwered, theirs. Then ſhe aſked him, if thoſe fields beyond the walks were theirs too? He anſwered, yes, madam, thoſe are ours, as you are ours, to look on, and no more.

97. HIS lordſhip, when he was newly made lord keeper, was in *Gray's-Inn* walks with ſir *Walter Rawleigh*; one came and told him, that the earl of *Exeter* was above. He continued upon occaſion ſtill walking a good while. At laſt when he came up, my lord of *Exeter* met him, and ſaid; My lord, I have made a great venture, to come up ſo high ſtairs, being a gouty man. His lordſhip anſwered; Pardon me, my lord, I have made the greateſt venture of all; for I have ventured upon your patience.

98. WHEN ſir *Francis Bacon* was made the king's attorney, ſir *Edward Coke* was put up from being lord chief juſtice of the common pleas, to be lord chief juſtice of the king's bench; which is a place of greater honour, but of leſs profit; and withal was made privy counſellor. After a few days, the lord *Coke* meeting with the king's attorney, ſaid unto him; Mr. attorney, this is all your doing: It is you that have made this ſtir. Mr. attorney anſwered: Ah, my lord! your lordſhip all this while hath grown in breadth; you muſt needs now grow in height, or elſe you would be a monſter.

99. ONE day queen *Elizabeth* told Mr. *Bacon*, that my lord of *Eſſex*, after great proteſtation of penitence and affection, fell in the end, but upon the ſuit of renewing his farm of ſweet wines. He anſwered; I read that in nature, there be two kinds of motions or appetites in ſympathy; the one as of iron, to the adamant for perfection; the other as of the vine, to the ſtake for ſuſtentation; that her majeſty was the one, and his ſuit the other.

100. MR. *Bacon*, after he had been vehement in parliament againſt depopulation and incloſures; and that ſoon after the queen told him, that ſhe had referred the hearing of Mr. *Mills*'s cauſe, to certain counſellors and judges; and aſked him how he liked of it? Anſwered; Oh madam! my mind is known; I am againſt all incloſures, and eſpecially againſt incloſed juſtice.

101. WHEN

101. When ſir *Nicolas Bacon* the lord keeper lived, every room in *Gorhambury* was ſerved with a pipe of water from the ponds, diſtant about a mile off. In the life-time of Mr. *Antony Bacon*, the water ceaſed. After whoſe death, his lordſhip coming to the inheritance, could not recover the water without infinite charge: when he was lord chancellor, he built *Verulam* houſe, cloſe by the pond-yard, for a place of privacy, when he was called upon, to diſpatch any urgent buſineſs. And being aſked, why he built that houſe there; his lordſhip anſwered, that ſince he could not carry the water to his houſe, he would carry his houſe to the water.

102. When my lord preſident of the council came firſt to be lord treaſurer, he complained to my lord chancellor of the troubleſomneſs of the place, for that the exchequer was ſo empty. The lord chancellor anſwered; my lord, be of good cheer, for now you ſhall ſee the bottom of your buſineſs at the firſt.

103. When his lordſhip was newly advanced to the great ſeal, *Gondomar* came to viſit him. My lord ſaid; that he was to thank God and the king for that honour; but yet, ſo he might be rid of the burden, he could very willingly forbear the honour: and that he formerly had a deſire, and the ſame continued with him ſtill, to lead a private life. *Gondomar* anſwered, that he would tell him a tale, of an old rat that would needs leave the world: and acquainted the young rats, that he would retire into his hole, and ſpend his days ſolitarily; and would enjoy no more comfort; and commanded them upon his high diſpleaſure, not to offer to come in unto him. They forbore two or three days; at laſt, one that was more hardy than the reſt, incited ſome of his fellows to go in with him, and he would venture to ſee how his father did: for he might be dead. They went in, and found the old rat ſitting in the midſt of a rich *Parmezan* cheeſe. So he applied the fable after his witty manner.

104. Rabelais tells a tale of one that was very fortunate in compounding differences. His ſon undertook the ſaid courſe, but could never compound any. Whereupon he came to his father, and aſked him; what art he had to reconcile differences? He anſwered; he had no other but this; to watch when the two parties were much wearied, and their hearts were too great to ſeek reconcilement at one another's hands; then to be a means betwixt them, and upon no other terms. After which the ſon went home, and proſpered in the ſame undertakings.

105. Alonso *Cartilio* was informed by his ſteward of the greatneſs of his expence, being ſuch as he could not hold out therewith. The biſhop aſked him, wherein it chiefly aroſe? His ſteward told him, in the multitude of his ſervants. The biſhop bad him to make him a note of thoſe that were neceſſary, and thoſe that might be ſpared. Which he did. And the biſhop taking occaſion to read it before moſt of his ſervants, ſaid to his ſteward; well, let theſe remain, becauſe I have need of them; and theſe other alſo becauſe they have need of me.

106. Mr. *Marbury* the preacher would ſay, that God was fain to do with wicked men, as men do with friſking jades in a paſture, that cannot take them up, till they get them at a gate. So wicked men will not be taken up till the hour of death.

107. Pope *Sixtus* the fifth, who was a very poor man's ſon, and his father's houſe ill thatched, ſo that the ſun came in, in many places, would ſport with his ignobility, and ſay; that he was, *natò di caſa illuſtre*, ſon of an illuſtrious houſe.

108. When the king of *Spain* conquered *Portugal*, he gave ſpecial charge to his lieutenant, that the ſoldiers ſhould not ſpoil, leſt he ſhould alienate the hearts of the people: the army alſo ſuffered much ſcarcity of victual. Whereupon the *Spaniſh* ſoldiers would afterwards ſay; that they had won the king and kingdom on earth, as the kingdom of heaven uſed to be won; by faſting and abſtaining from that which is another man's.

109. They feigned a tale of *Sixtus quintus*, whom they called ſize ace; that after his death he went to hell, and the porter of hell ſaid to him; you have ſome reaſon to offer your ſelf to this place, becauſe you were a wicked man; but yet, becauſe you were a pope, I have order not to receive you: you have a place of your own, purgatory, you may go thither. So he went away, and ſought about a great while for purgatory, and could find no ſuch place. Upon that he took heart, and went to heaven and knocked; and St. *Peter* aſked, who was there? He ſaid, *Sixtus* pope. Whereunto St. *Peter* ſaid, why do you knock? you have the keys. *Sixtus* anſwered, it is true, but it is ſo long ſince they were given, as I doubt the wards of the lock be altered.

110. Charles king of *Sweden*, a great enemy of the Jeſuits, when he took any of their colleges, he would hang the old Jeſuits, and put the young to his mines, ſaying; that ſince they wrought ſo hard above ground, he would try how they could work under ground.

111. In chancery, at one time when the counſel of the parties ſet forth the boundaries of the land in queſtion, by the plot; and the counſel of one part ſaid, we lie on this ſide, my lord; and the counſel of the other part ſaid, and we lie on this ſide: the lord chancellor *Hatton* ſtood up and ſaid; if you lye on both ſides, whom will you have me to believe?

112. Sir *Edward Coke* was wont to ſay, when a great man came to dinner to him, and gave him no knowledge of his coming; ſir, ſince you ſent me no word of your coming, you muſt dine with me; but if I had known of it in due time, I would have dined with you.

113. Pope *Julius* the third, when he was made pope, gave his hat unto a youth, a favourite of his, with great ſcandal. Whereupon at one time a cardinal that might be free with him, ſaid modeſtly to him; what did your holineſs ſee in that young man, to make him cardinal? *Julius* anſwered, what did you ſee in me to make me pope?

114. The ſame *Julius*, upon like occaſion of ſpeech, why he ſhould bear ſo great affection to the ſame young man, would ſay; that he found by aſtrology, that it was the youth's deſtiny to be a great prelate; which was impoſſible except himſelf were pope. And therefore that he did raiſe him, as the driver on of his own fortune.

115. Sir *Thomas More* had only daughters at the firſt, and his wife did ever pray for a boy. At laſt ſhe had a boy, which being come to man's eſtate, proved but ſimple. Sir *Thomas* ſaid to his wife, thou prayedſt ſo long for a boy, that he will be a boy as long as he lives.

116. Sir *Fulk Grevil*, afterwards lord *Brook*, in parliament, when the houſe of commons in a great buſineſs, ſtood much upon precedents, ſaid unto them; why do you ſtand ſo much upon precedents? The times hereafter will be good or bad. If good, precedents will do no harm; if bad, power will make a way where it finds none.

117. Sir *Thomas More*, on the day that he was beheaded, had a barber ſent to him, becauſe his hair was long; which was thought, would make him more

more commiſerated with the people. The barber came to him, and aſked him, whether he would be pleaſed to be trim'd? In good faith, honeſt fellow, (ſaith ſir *Thomas*) the king and I have a ſuit for my head; and till the title be cleared, I will do no coſt upon it.

118. STEPHEN *Gardiner* biſhop of *Wincheſter*, a great champion of the popiſh religion, was wont to ſay of the proteſtants who ground upon the ſcripture; that they were like poſts, that bring truth in their letters, and lyes in their mouths.

119. THE former Sir *Thomas More* had ſent him by a ſuitor in chancery, two ſilver flagons. When they were preſented by the gentleman's ſervant, he ſaid to one of his men, have him to the cellar, and let him have of my beſt wine: and turning to the ſervant, ſaid; tell thy maſter, if he like it, let him not ſpare it.

120. MICHAEL *Angelo* the famous painter, painting in the pope's chapel the portraiture of hell and damned ſouls, made one of the damned ſouls ſo like a cardinal that was his enemy, as every body at firſt ſight knew it. Whereupon the cardinal complained to pope *Clement*, humbly praying it might be defaced. The pope ſaid to him; why, you know very well, I have power to deliver a ſoul out of purgatory, but not out of hell.

121. THERE was an agent here for the *Dutch*, called *Carroon*; and when he uſed to move the queen for farther ſuccours, and more men, my lord *Henry Howard* would ſay; that he agreed well with the name of *Charon*, ferryman of hell; for he came ſtill for more men, to increaſe *regnum umbrarum*.

122. THEY were wont to call referring to the maſters in chancery, committing. My lord keeper *Egerton*, when he was maſter of the rolls, was wont to aſk what the cauſe had done that it ſhould be committed.

123. THEY feigned a tale, principally againſt doctors reports in the chancery; that ſir *Nicolas Bacon*, when he came to heaven gate, was oppoſed, touching an unjuſt decree which had been made in the chancery. Sir *Nicolas* deſired to ſee the order, whereupon the decree was drawn up; and finding it to begin *veneris*, *&c.* why (ſaith he) I was then ſitting in the ſtar-chamber; this concerns the maſter of the rolls, let him anſwer it. Soon after came the maſter of the rolls, *Cordal*; who died indeed a ſmall time after ſir *Nicolas Bacon*; and he was likewiſe ſtayed upon it: and looking into the order, he found, that upon the reading of a certificate of Dr. *Gibſon*, it was ordered, that his report ſhould be decreed. And ſo he put it upon Dr. *Gibſon*, and there it ſtuck.

124. SIR *Nicolas Bacon*, when a certain nimble-witted counſellor at the bar, who was forward to ſpeak, did interrupt him often, ſaid unto him; there's a great difference betwixt you and me: a pain to me to ſpeak, and a pain to you to hold your peace.

125. THE ſame ſir *Nicolas Bacon*, upon bills exhibited to diſcover where lands lay, upon proof, that they had a certain quantity of land, but could not ſet it forth, was wont to ſay; and if you cannot find your land in the countrey, how will you have me find it in the chancery?

126. MR. *Howland*, in conference with a young ſtudent, arguing a caſe, happened to ſay, I would aſk you but this queſtion. The ſtudent preſently interrupted him, to give him an anſwer. Whereunto Mr. *Howland* gravely ſaid; nay, though I aſk you a queſtion, yet I did not mean you ſhould anſwer me, I mean to anſwer my ſelf.

127. Pope *Adrian* the ſixth was talking with the duke of *Seſa*, that *Paſquil* gave great ſcandal, and that he would have him thrown into the river: but *Seſa* anſwered; do it not, holy father, for then he will turn frog; and whereas now he chants but by day, he will then chant both by day and by night.

128. There was a gentleman in *Italy* that wrote to a great friend of his, whom the pope had newly advanced to be cardinal; that he was very glad of his advancement, for the cardinal's own ſake; but he was ſorry that himſelf had loſt a good friend.

129. There was a king of *Hungary* took a biſhop in battel, and kept him priſoner: whereupon the Pope writ a monitory to him, for that he had broken the privilege of holy church, and taken his ſon. The king ſent an embaſſage to him, and ſent withal the armour wherein the biſhop was taken, and this only in writing; *Vide num haec ſit veſtis filii tui:* Know now whether this be thy ſon's coat.

130. Sir *Amyas Pawlet*, when he ſaw too much haſte made in any matter, was wont to ſay; ſtay a while, that we may make an end the ſooner.

131. A maſter of the requeſts to queen *Elizabeth* had divers times moved for audience, and been put off. At laſt he came to the queen in a progreſs, and had on a new pair of boots. The queen, who loved not the ſmell of new leather, ſaid to him; fye ſloven, thy new boots ſtink. Madam, ſaid he, it is not my new boots that ſtink; but it is the ſtale bills that I have kept ſo long.

132. At an act of the commencement, the anſwerer gave for his queſtion, that an ariſtocraſy was better than a monarchy. The replyer, who was a diſſolute man, did tax him that being a private bred man, he would give a queſtion of ſtate. The anſwerer ſaid, that the replyer did much wrong the privilege of ſcholars, who would be much ſtreightned if they ſhould give queſtions of nothing, but ſuch things wherein they are practiſed: and added, we have heard your ſelf diſpute of virtue, which no man will ſay you put much in practice.

133. Queen *Iſabella* of *Spain* uſed to ſay, whoſoever hath a good preſence, and a good faſhion, carries continual letters of recommendation.

134. Alonso of *Aragon* was wont to ſay in commendation of age, that age appeared to be beſt in four things: old wood beſt to burn; old wine to drink; old friends to truſt; and old authors to read.

135. It was ſaid of *Auguſtus*, and afterward the like was ſaid of *Septimius Severus:* both which did infinite miſchief in their beginnings, and infinite good toward their ends; that they ſhould either have never been born or never died.

136. Constantine the Great, in a kind of envy, himſelf being a great builder, as *Trajan* likewiſe was, would call *Trajan parietaria*, wall-flower, becauſe his name was upon ſo many walls.

137. Alonso of *Aragon* was wont to ſay of himſelf, that he was a great necromancer, for that he uſed to aſk counſel of the dead; meaning of books.

138. Ethelwold, biſhop of *Wincheſter*, in a famine, ſold all the rich veſſels and ornaments of the church, to relieve the poor with bread; and ſaid, there was no reaſon that the dead temples of God ſhould be ſumptuouſly furniſhed, and the living temples ſuffer penury.

139. Many men, eſpecially ſuch as affect gravity, have a manner after other mens ſpeech to ſhake their heads. A great officer of this land would

ſay, it was as men ſhake a bottle, to ſee if there were any wit in their heads or no?

140. AFTER a great fight, there came to the camp of *Conſalvo* the great captain, a gentleman, proudly horſed and armed: *Diego de Mendoza*, aſked the great captain, who's this? Who anſwered; it is ſaint *Ermin*, who never appears but after the ſtorm.

141. THERE was one that died greatly in debt; when it was reported in ſome company, where divers of his creditors caſually were, that he was dead: one began to ſay; well, if he be gone, then he hath carried five hundred ducates of mine with him into the other world: and another ſaid, and two hundred of mine: and a third ſpake of great ſums of his. Whereupon one that was amongſt them ſaid; I perceive now, that though a man cannot carry any of his own with him into the next world, yet he may carry away that which is another man's.

142. FRANCIS *Carvajal*, that was the great captain of the rebels of *Peru*, had often given the chace to *Diego Centeno*, a principal commander of the emperor's party: he was afterwards taken by the emperor's lieutenant *Gaſca*, and committed to the cuſtody of *Diego Centeno*, who uſed him with all poſſible courteſy; inſomuch as *Carvajal* aſked him; I pray, ſir, who are you that uſe me with this courteſy? *Centeno* ſaid; do not you know *Diego Centeno? Carvajal* anſwered; truly, ſir, I have been ſo uſed to ſee your back, as I knew not your face.

143. THERE was a merchant died that was very far in debt, his goods and houſhold-ſtuff were ſet forth to ſale. A ſtranger would needs buy a pillow there, ſaying; this pillow ſure is good to ſleep upon, ſince he could ſleep that owed ſo many debts.

144. A lover met his lady in a cloſe chair, ſhe thinking to have gone unknown, he came and ſpake to her: ſhe aſked him, how did you know me? He ſaid, becauſe my wounds bleed afreſh; alluding to the common tradition, that the wounds of a body ſlain, will bleed afreſh upon the approach of the murtherer.

145. A gentleman brought muſick to his lady's window. She hated him, and had warned him often away: and when he would not deſiſt, ſhe threw ſtones at him: whereupon a gentleman ſaid unto him that was in his company; what greater honour can you have to your muſick, than that ſtones come about you, as they did to *Orpheus?*

146. CORANUS the *Spaniard*, at a table at dinner, fell into an extolling his own father, ſaying; if he could have wiſh'd of God, he could not have choſen amongſt men a better father. Sir *Henry Savil* ſaid, what, not *Abraham?* Now *Coranus* was doubted to deſcend of a race of *Jews*.

147. BRESQUET, jeſter to *Francis* the firſt of *France*, did keep a calendar of fools, wherewith he did uſe to make the king ſport; telling him ever the reaſon, why he put any one into his calendar. When *Charles* the fifth emperor, upon confidence of the noble nature of *Francis* paſſed through *France*, for the appeaſing of the rebellion of *Gaunt*, *Breſquet* put him into his calendar. The king aſked him the cauſe. He anſwered; becauſe you having ſuffered at the hands of *Charles* the greateſt bitterneſs that ever prince did from another, nevertheleſs he would truſt his perſon into your hands. Why, *Breſquet*, ſaid the king, what wilt thou ſay, if thou ſeeſt him paſs back in as great ſafety, as if he marched through the midſt of *Spain?* ſaith *Breſquet*; why then I will put him out, and put in you.

148. ARCH-

148. Archbishop *Grindall* was wont to ſay; that the phyſicians here in *England* were not good at the cure of particular diſeaſes; but had only the power of the church to bind and looſe.

149. Cosmus duke of *Florence* was wont to ſay of perfidious friends, that we read, that we ought to forgive our enemies; but we do not read that we ought our friends.

150. A papiſt being oppoſed by a proteſtant, that they had no ſcripture for images, anſwered, yes; for you read, that the people laid their ſick in the ſtreets, that the ſhadow of ſaint *Peter* might come upon them; and that a ſhadow was an image, and the obſcureſt of all images.

151. Sir *Edward Dyer*, a grave and wiſe gentleman, did much believe in *Kelley* the alchymiſt; that he did indeed the work, and did make gold, inſomuch that he went into *Germany*, where *Kelley* then was, to inform himſelf fully thereof. After his return, he dined with my lord of *Canterbury*; where, at that time, was at the table Dr. *Brown* the phyſician. They fell in talk of *Kelley*. Sir *Edward Dyer* turning to the archbiſhop, ſaid; I do aſſure your grace, that that I ſhall tell you is truth; I am an eye-witneſs thereof; and if I had not ſeen it, I ſhould not have believed it. I ſaw Mr. *Kelley*, put of the baſe metal into the crucible; and after it was ſet a little upon the fire, and a very ſmall quantity of the medicine put in, and ſtirred with a ſtick of wood, it came forth in great proportion, perfect gold; to the touch, to the hammer, and to the teſt. My lord archbiſhop ſaid; you had need take heed what you ſay, Sir *Edward Dyer*, for here is an infidel at the board. Sir *Edward Dyer* ſaid again pleaſantly; I ſhould have looked for an infidel ſooner in any place than at your grace's table. What ſay you Dr. *Brown*, ſaid the archbiſhop? Dr. *Brown* anſwered, after his blunt and huddling manner; the gentleman hath ſpoken enough for me. Why, ſaith the archbiſhop, what hath he ſaid? Marry, ſaith Dr. *Brown*, he ſaid, he would not have believed it, except he had ſeen it; and no more will I.

152. Doctor *Johnſon* ſaid, that in ſickneſs there were three things that were material; the phyſician, the diſeaſe, and the patient: and if any two of theſe joined, then they get the victory; for, *Ne Hercules quidem contra duos*. If the phyſician and the patient join, then down goes the diſeaſe; for then the patient recovers; if the phyſician and the diſeaſe join; that is a ſtrong diſeaſe; and the phyſician miſtaking the cure, then down goes the patient; if the patient and the diſeaſe join, then down goes the phyſician, for he is diſcredited.

153. Mr. *Bettenham* ſaid; that virtuous men were like ſome herbs, and ſpices that give not out their ſweet ſmell, till they be broken or cruſhed.

154. There was a painter became a phyſician; whereupon one ſaid to him; you have done well; for before the faults of your work were ſeen, but now they are unſeen.

155. There was a gentleman that came to the tilt all in orange-tawny, and ran very ill. The next day he came again all in green, and ran worſe. There was one of the lookers on aſked another; what is the reaſon that this gentleman changeth his colours? The other anſwered, ſure, becauſe it may be reported, that the gentleman in the green ran worſe than the gentleman in the orange-tawny.

156. Zelim was the firſt of the *Ottomans* that did ſhave his beard, whereas his predeceſſors wore it long. One of his baſhaws aſked him, why he altered the cuſtom of his predeceſſors? He anſwered, becauſe you baſhaws may not lead me by the beard, as you did them.

157. Æneas

157. AENEAS *Sylvius*, that was pope *Pius ſecundus*, was wont to ſay; that the former popes did wiſely to ſet the lawyers a work to debate, whether the donation of *Conſtantine* the *Great* to *Sylveſter*, of St. *Peter*'s patrimony, were good or valid in law or no? the better to ſkip over the matter in fact, whether there was ever any ſuch thing at all or no.

158. THE lord biſhop *Andrews*, was aſked at the firſt coming over of the archbiſhop of *Spalato*, whether he were a proteſtant or no? He anſwered; truly I know not; but I think he is a deteſtant; that was, of moſt of the opinions of *Rome*.

159. IT was ſaid amongſt ſome of the grave prelates of the council of *Trent*, in which the ſchool divines bare the ſway; that the ſchool-men were like the aſtronomers, who to ſave the *phaenomena*, framed to their conceit eccentricks, and epicycles, and a wonderful engine of orbs; though no ſuch things were: ſo they to ſave the practice of the church, had deviſed a great number of ſtrange poſitions.

160. AENEAS *Sylvius* would ſay; that the Chriſtian faith and law, though it had not been confirmed by miracles, yet was worthy to be received for the honeſty thereof.

161. MR. *Bacon* would ſay, that it was in his buſineſs, as it is frequently in the ways: that the next way is commonly the fouleſt; and that if a man will go the faireſt way, he muſt go ſomewhat about.

162. MR. *Bettenham*, reader of *Grays-Inn*, uſed to ſay, that riches were like muck; when it lay upon a heap, it gave but a ſtench and ill odour; but when it was ſpread upon the ground, then it was cauſe of much fruit.

163. CICERO married his daughter to *Dolabella*, that held *Caeſar*'s party: *Pompey* had married *Julia*, that was *Caeſar*'s daughter. After, when *Cæſar* and *Pompey* took arms one againſt the other; and *Pompey* had paſſed the ſeas, and *Caeſar* poſſeſſed *Italy*; *Cicero* ſtayed ſomewhat long in *Italy*; but at laſt ſailed over to join with *Pompey*: who when he came to him, *Pompey* ſaid, you are welcome, but where left you your ſon-in-law? *Cicero* anſwered, with your father-in-law.

164. VESPASIAN, and *Titus* his eldeſt ſon, were both abſent from *Rome*, when the empire was caſt upon *Veſpaſian*; *Domitian* his younger ſon was at *Rome*, who took upon him the affairs; and being of a turbulent ſpirit, made many changes; and diſplaced divers officers and governours of provinces, ſending them ſucceſſors. So when *Veſpaſian* returned to *Rome*, and *Domitian* came into his preſence, *Veſpaſian* ſaid to him; ſon, I looked when you would have ſent me a ſucceſſor.

165. NERO loved a beautiful youth, whom he uſed viciouſly, and called him wife: There was a ſenator at *Rome* that ſaid ſecretly to his friend, it was pity *Nero*'s father had not ſuch a wife.

166. GALBA ſucceeded *Nero*, and his age being deſpiſed, there was much licence and confuſion in *Rome* during his empire; whereupon a ſenator ſaid in full ſenate; it were better to live where nothing is lawful, than where all things are lawful.

167. AUGUSTUS *Caeſar* did write to *Livia*, who was over-ſenſible of ſome ill words that had been ſpoken of them both: let it not trouble thee, my *Livia*, if any man ſpeak ill of us; for we have enough that no man can do ill unto us.

168. CHILON ſaid, that kings friends, and favourites, were like caſting counters; that ſometimes ſtood for one, ſometimes for ten, ſometimes for an hundred.

169. THE-

169. THEODOSIUS, when he was preſſed by a ſuitor, and denied him; the ſuitor ſaid, why, ſir, you promiſed it. He anſwered; I ſaid it, but I did not promiſe it, if it be unjuſt.

170. THE *Romans*, when they ſpake to the people, were wont to ſtyle them *ye Romans:* when commanders in war ſpake to their army, they ſtyled them *my ſoldiers*. There was a mutiny in *Caeſar*'s army, and ſomewhat the ſoldiers would have had, yet they would not declare themſelves in it, but only demanded a miſſion or diſcharge; though with no intention it ſhould be granted: but knowing, that *Caeſar* had at that time great need of their ſervice, thought by that means to wrench him to their other deſires: whereupon with one cry they aſked miſſion. *Caeſar* after ſilence made, ſaid; I for my part *ye Romans*; this title did actually ſpeak them to be diſmiſſed: which voice they had no ſooner heard, but they mutinied again; and would not ſuffer him to go on with his ſpeech, until he had called them by the name of his *ſoldiers*, and ſo with that one word he appeaſed the ſedition.

171. CAESAR would ſay of *Sylla*, for that he did reſign his dictatorſhip; *Sylla* was ignorant of letters, he could not dictate.

172. SENECA ſaid of *Caeſar*, that he did quickly ſhew the ſword, but never leave it off.

173. DIOGENES begging, as divers philoſophers then uſed, did beg more of a prodigal man, than of the reſt which were preſent. Whereupon one ſaid to him; ſee your baſeneſs, that when you find a liberal mind, you will take moſt of him. No, ſaid *Diogenes*, but I mean to beg of the reſt again.

174. THEMISTOCLES, when an embaſſador from a mean eſtate did ſpeak great matters; ſaid to him, friend, thy words would require a city.

175. THEY would ſay of the duke of *Guiſe*, *Henry*; that he was the greateſt uſurer in *France*, for that he had turned all his eſtate into obligations. Meaning, that he had ſold and oppignerated all his patrimony, to give large donatives to other men.

176. CAESAR *Borgia*, after long diviſion between him and the lords of *Romagna*, fell to accord with them. In this accord there was an article, that he ſhould not call them at any time all together in perſon. The meaning was, that knowing his dangerous nature, if he meant them treaſon, he might have opportunity to oppreſs them all together at once. Nevertheleſs, he uſed ſuch fine art, and fair carriage, that he won their confidence to meet all together in counſel at *Cinigaglia*; where he murdered them all. This act, when it was related unto pope *Alexander*, his father, by a cardinal, as a thing happy, but very perfidious; the pope ſaid, it was they that broke their covenant firſt, in coming all together.

177. TITUS *Quinctius* was in the counſel of the *Achaians*, what time they deliberated, whether in the war then to follow, between the *Romans* and King *Antiochus*, they ſhould confederate themſelves with the *Romans*, or with King *Antiochus?* In that counſel the *AEtolians*, who incited the *Achaians* againſt the *Romans*, to diſable their forces, gave great words, as if the late victory the *Romans* had obtained againſt *Philip* king of *Macedon*, had been chiefly by the ſtrength and forces of the *AEtolians* themſelves: and on the other ſide the embaſſador of *Antiochus* did extol the forces of his maſter; ſounding what an innumerable company he brought in his army; and gave the nations ſtrange names; as *Elymaeans*, *Caducians*, and others.

others. After both their harangues, *Titus Quinctius*, when he roſe up, ſaid; it was an eaſy matter to perceive what it was that had joined *Antiochus* and the *AEtolians* together; that it appear'd to be by the reciprocal lying of each, touching the other forces.

178. PLATO was amorous of a young gentleman, whoſe name was *Stella*, that ſtudied aſtronomy; and went oft in the clear nights to look upon the ſtars. Whereupon *Plato* wiſhed himſelf heaven, that he might look upon *Stella* with a thouſand eyes.

179. THE *Lacedaemonians* were beſieged by the *Athenians* in the port of *Pyle*, which was won, and ſome ſlain, and ſome taken. There was one ſaid to one of them that was taken, by way of ſcorn; were they not brave men that loſt their lives at the port of *Pyle?* He anſwered; certainly a *Perſian* arrow is much to be ſet by, if it can chuſe out a brave man.

180. CLODIUS was acquitted by a corrupt jury, that had palpably taken ſhares of money, before they gave up their verdict; they prayed of the ſenate a guard, that they might do their conſciences, for that *Clodius* was a very ſeditious young nobleman. Whereupon all the world gave him for condemned. But acquitted he was. *Catulus*, the next day ſeeing ſome of them that had acquitted him together, ſaid to them; what made you aſk of us a guard? Were you afraid your money ſhould have been taken from you?

181. AT the ſame judgment, *Cicero* gave in evidence upon oath: and when the jury, which conſiſted of fifty ſeven, had paſſed againſt his evidence, one day in the ſenate *Cicero* and *Clodius* being in altercation, *Clodius* upbraided him, and ſaid; the jury gave you no credit. *Cicero* anſwered, five and twenty gave me credit; but there were two and thirty that gave you no credit, for they had their money beforehand.

182. SIR *Henry Savil* was aſked by my lord of *Eſſex*, his opinion touching poets? He anſwered my lord; that he thought them the beſt writers, next to them that writ proſe.

183. DIOGENES having ſeen that the kingdom of *Macedon*, which before was contemptible and low, began to come aloft when he died, was aſked, how he would be buried? He anſwered; with my face downward: for within a while the world will be turned upſide down, and then I ſhall lie right.

184. CATO the elder was wont to ſay; that the *Romans* were like ſheep; a man were better to drive a flock of them, than one of them.

185. WHEN *Lycurgus* was to reform and alter the ſtate of *Sparta*; in conſultation one adviſed, that it ſhould be reduced to an abſolute popular equality: but *Lycurgus* ſaid to him; ſir, begin it in your own houſe.

186. BION, that was an atheiſt, was ſhew'd in a port city, in a temple of *Neptune*, many tables of pictures, of ſuch as had in tempeſts made their vows to *Neptune*, and were ſaved from ſhipwreck: and was aſk'd, how ſay you now? Do you not acknowledge the power of the Gods? But ſaith he; Ay, but where are they painted that have been drowned after their vows?

187. CICERO was at dinner, where there was an ancient lady that ſpake of her own years, and ſaid; ſhe was but forty years old. One that ſate by *Cicero*, rounded him in the ear, and ſaid; ſhe talks of forty years old; but ſhe is far more out of queſtion. *Cicero* anſwered him again; I muſt believe her, for I have heard her ſay ſo any time theſe ten years.

188. THERE was a ſoldier that vaunted before *Julius Caeſar*, of the hurts he had received in his face. *Julius Caeſar* knowing him to be but

a coward, told him; you were beſt take heed next time you run away, how you look back.

189. THERE was a ſuitor to *Veſpaſian*, who to lay his ſuit fairer, ſaid it was for his brother; whereas indeed it was for a piece of money. Some about *Veſpaſian* told the emperor, to croſs him; that the party his ſervant ſpoke for, was not his brother; but that he did it upon a bargain. *Veſpaſian* ſent for the party intereſted, and aſked him; whether his mean employed by him was his brother or no? He durſt not tell untruth to the emperor, and confeſſed he was not his brother. Whereupon the emperor ſaid, this do, fetch me the money, and you ſhall have your ſuit diſpatched. Which he did. The courtier which was the mean, ſolicited *Veſpaſian* ſoon after about his ſuit: why, (ſaith *Veſpaſian*) I gave it laſt day to a brother of mine.

190. VESPASIAN aſked of *Apollonius*; what was the cauſe of *Nero*'s ruin? Who anſwered, *Nero* could tune the harp well, but in government he did always wind up the ſtrings too high, or let them down too low.

191. DIONYSIUS the tyrant, after he was depoſed and brought to *Corinth*, kept a ſchool. Many uſed to viſit him; and amongſt others, one when he came in, opened his mantle and ſhook his clothes; thinking to give *Dionyſius* a gentle ſcorn; becauſe it was the manner to do ſo for them that came in to ſee him while he was tyrant. But *Dionyſius* ſaid to him; I prithee do ſo, rather when thou goeſt out, that we may ſee thou ſtealeſt nothing away.

192. DIOGENES, one terrible froſty morning, came into the market-place, and ſtood naked, ſhaking, to ſhew his tolerance. Many of the people came about him pitying him: *Plato* paſſing by, and knowing he did it to be ſeen, ſaid to the people as he went by; if you pity him indeed, let him alone to himſelf.

193. ARISTIPPUS was earneſt ſuitor to *Dionyſius* for ſome grant, who would give no ear to his ſuit. *Ariſtippus* fell at his feet, and then *Dionyſius* granted it. One that ſtood by ſaid afterwards to *Ariſtippus*; you a philoſopher, and be ſo baſe as to throw your ſelf at the tyrant's feet to get a ſuit. *Ariſtippus* anſwered; the fault is not mine, but the fault is in *Dionyſius*, that carries his ears in his feet.

194. SOLON when he wept for his ſon's death, and one ſaid to him, weeping will not help; anſwered, alas therefore I weep, becauſe weeping will not help.

195. THE ſame *Solon* being aſked; whether he had given the *Athenians* the beſt laws? anſwered, the beſt of thoſe that they would have received.

196. ONE ſaid to *Ariſtippus*; 'tis a ſtrange thing, why men ſhould rather give to the poor, than to philoſophers. He anſwered, becauſe they think themſelves may ſooner come to be poor, than to be philoſophers.

197. TRAJAN would ſay of the vain jealouſy of princes, that ſeek to make away thoſe that aſpire to their ſucceſſion; that there was never king that did put to death his ſucceſſor.

198. WHEN it was repreſented to *Alexander*, to the advantage of *Antipater*, who was a ſtern and imperious man; that he only of all his lieutenants wore no purple, but kept the *Macedonian* habit of black; *Alexander* ſaid, yea, but *Antipater* is all purple within.

199. ALEXANDER uſed to ſay of his two friends, *Craterus* and *Hephaeſtion*; that *Hephaeſtion* loved *Alexander*, and *Craterus* loved the king.

200. IT

200. It fell out ſo, that as *Livia* went abroad in *Rome*, there met her naked young men that were ſporting in the ſtreets, which *Auguſtus* went about ſeverely to puniſh in them: but *Livia* ſpake for them, and ſaid; it was no more to chaſte women, than ſo many ſtatues.

201. Philip of *Macedon* was wiſhed to baniſh one for ſpeaking ill of him. But *Philip* anſwered; better he ſpeak where we are both known, than where we are both unknown.

202. Lucullus entertained *Pompey* in one of his magnificent houſes: *Pompey* ſaid, this is a marvellous fair and ſtately houſe for the ſummer; but methinks it ſhould be very cold for winter. *Lucullus* anſwered; do you not think me as wiſe as divers fowls are, to change my habitation in the winter ſeaſon.

203. Plato entertained ſome of his friends at a dinner, and had in the chamber a bed, or couch, neatly and coſtly furniſhed. *Diogenes* came in, and got up upon the bed, and trampled it, ſaying; I trample upon the pride of *Plato*. *Plato* mildly anſwered, but with greater pride, *Diogenes*.

204. Pompey being commiſſioner for ſending grain to *Rome* in time of dearth, when he came to the ſea, found it very tempeſtuous and dangerous; inſomuch as thoſe about him adviſed him by no means to embark; but *Pompey* ſaid, it is of neceſſity that I go, not that I live.

205. Demosthenes was upbraided by *AEſchines*, that his ſpeeches did ſmell of the lamp. But *Demoſthenes* ſaid; indeed there is a great deal of difference between that which you and I do by lamp-light.

206. Demades the orator, in his age was talkative, and would eat hard: *Antipater* would ſay of him, that he was like a ſacrifice, that nothing was left of it but the tongue and the paunch.

207. Themistocles after he was baniſhed, and had wrought himſelf into great favour afterwards, ſo that he was honoured and ſumptuouſly ſerved, ſeeing his preſent glory, ſaid unto one of his friends; if I had not been undone, I had been undone.

208. Philo *Judaeus* ſaith, that the ſenſe is like the ſun; for the ſun ſeals up the globe of heaven, and opens the globe of earth: ſo the ſenſe doth obſcure heavenly things, and reveals earthly things.

209. Alexander, after the battel of *Granicum*, had very great offers made him by *Darius*: conſulting with his captains concerning them, *Parmenio* ſaid; ſure I would accept of theſe offers, if I were as *Alexander*. *Alexander* anſwered; ſo would I, if I were as *Parmenio*.

210. Alexander was wont to ſay, he knew himſelf to be mortal, chiefly by two things; ſleep, and luſt.

211. Augustus *Caeſar* would ſay, that he wonder'd that *Alexander* feared he ſhould want work, having no more worlds to conquer: as if it were not as hard a matter to keep as to conquer.

212. Antigonus, when it was told him that the enemy had ſuch volleys of arrows that they did hide the ſun, ſaid; that falls out well, for it is hot weather, and ſo we ſhall fight in the ſhade.

213. Cato the elder being aged, buried his wife, and married a young woman. His ſon came to him, and ſaid; ſir, what have I offended, that you have brought a ſtep-mother into your houſe? The old man anſwered; nay, quite contrary, ſon; thou pleaſeſt me ſo well, as I would be glad to have more ſuch.

214. Crassus the orator had a fiſh which the *Romans* called *Muraena*, that he made very tame and fond of him; the fiſh died, and *Craſſus* wept for it.

One day falling in contention with *Domitius* in the ſenate, *Domitius* ſaid; fooliſh *Craſſus*, you wept for your *Muraena*. *Craſſus* replied, that's more than you did for both your wives.

215. PHILIP, *Alexander*'s father, gave ſentence againſt a priſoner what time he was drowſy, and ſeemed to give ſmall attention. The priſoner after ſentence was pronounced, ſaid, I appeal. The king ſomewhat ſtirred, ſaid; to whom do you appeal? The priſoner anſwered; from *Philip* when he gave no ear, to *Philip* when he ſhall give ear.

216. THERE was a philoſopher that diſputed with *Adrian* the emperor, and did it but weakly. One of his friends that ſtood by, afterwards ſaid unto him: methinks you were not like your ſelf laſt day, in argument with the emperor; I could have anſwered better my ſelf. Why, ſaid the philoſopher, would you have me contend with him that commands thirty legions.

217. WHEN *Alexander* paſſed into *Aſia*, he gave large donatives to his captains, and other principal men of virtue; inſomuch as *Parmenio* aſked him; ſir, what do you keep for your ſelf? He anſwered, hope.

218. VESPASIAN ſet a tribute upon urine, *Titus* his ſon emboldened himſelf to ſpeak to his father of it: and repreſented it as a thing indigñ and ſordid. *Veſpaſian* ſaid nothing for the time; but a while after, when it was forgotten, ſent for a piece of ſilver out of the tribute-money; and called to his ſon, bidding him to ſmell to it; and aſked him, whether he found any offence? Who ſaid, no: why ſo, ſaith *Veſpaſian* again; yet this comes out of urine.

219. NERVA the emperor ſucceeded *Domitian*, who had been tyrannical; and in his time many noble houſes were overthrown by falſe accuſations; the inſtruments whereof were chiefly, *Marcellus* and *Regulus*. The emperor *Nerva* one night ſupp'd privately with ſome ſix or ſeven: amongſt whom there was one that was a dangerous man; and began to take the like courſes as *Marcellus* and *Regulus* had done. The emperor fell into diſcourſe of the injuſtice and tyranny of the former time; and by name, of the two accuſers; and ſaid, what ſhould we do with them, if we had them now? One of them that was at ſupper, and was a free-ſpoken ſenator, ſaid; marry, they ſhould ſup with us.

220. THERE was one that found a great maſs of money digged under ground in his grandfather's houſe; and being ſomewhat doubtful of the caſe, ſignified it to the emperor, that he had found ſuch treaſure. The emperor made a reſcript thus; uſe it. He writ back again; that the ſum was greater than his eſtate or condition could uſe. The emperor writ a new reſcript, thus; abuſe it.

221. JULIUS *Caeſar*, as he paſſed by, was by acclamation of ſome that ſtood in the way, termed king, to try how the people would take it. The people ſhewed great murmur and diſtaſte at it. *Caeſar* finding where the wind ſtood, ſlighted it, and ſaid; I am not king, but *Caeſar*; as if they had miſtaken his name. For *rex* was a ſurname amongſt the *Romans*, as king is with us.

222. WHEN *Croeſus*, for his glory, ſhewed *Solon* his great treaſures of gold, *Solon* ſaid to him; if another king come that hath better iron than you, he will be maſter of all this gold.

223. ARISTIPPUS being reprehended of luxury, by one that was not rich, for that he gave ſix crowns for a ſmall fiſh, anſwered; why, what would you have given? The other ſaid, ſome twelve pence. *Ariſtippus* ſaid again; and ſix crowns is no more with me.

224. PLATO reprehended ſeverely a young man for entering into a diſſolute houſe. The young man ſaid to him; why do you reprehend ſo ſharply for ſo ſmall a matter? *Plato* replied, but cuſtom is no ſmall matter.

225. ARCHIDAMUS, king of *Lacedaemon*, having received from *Philip* king of *Macedon* (after *Philip* had won the victory of *Chaeronea*, upon the *Athenians*) proud letters, writ back to him; that if he meaſured his own ſhadow, he would find it no longer than it was before his victory.

226. PYRRHUS, when his friends congratulated to him his victory over the *Romans*, under the conduct of *Fabricius*, but with great ſlaughter of his own ſide, ſaid to them again; yes, but if we have ſuch another victory, we are undone.

227. PLATO was wont to ſay of his maſter *Socrates*, that he was like the apothecaries gally-pots; that had on the out-ſides apes, and owls, and ſatyrs; but within, precious drugs.

228. ALEXANDER ſent to *Phocion* a great preſent of money. *Phocion* ſaid to the meſſenger; why doth the king ſend to me, and to none elſe? The meſſenger anſwered; becauſe he takes you to be the only good man in *Athens*. *Phocion* replied; if he think ſo, pray let him ſuffer me to be ſo ſtill.

229. AT a banquet, where thoſe that were called the ſeven wiſe men of *Greece*, were invited by the embaſſador of a barbarous king; the embaſſador related, that there was a neighbour mightier than his maſter, pick'd quarrels with him, by making impoſſible demands; otherwiſe threatening war; and now at that preſent had demanded of him, to drink up the ſea. Whereunto one of the wiſe men ſaid, I would have him undertake it. Why, ſaith the embaſſador, how ſhall he come off? Thus, (ſaith the wiſe man,) let that king firſt ſtop the rivers which run into the ſea, which are no part of the bargain, and then your maſter will perform it.

230. AT the ſame banquet, the embaſſador deſired the ſeven, and ſome other wiſe men that were at the banquet, to deliver every one of them ſome ſentence or parable, that he might report to his king the wiſdom of *Graecia*, which they did; only one was ſilent; which the embaſſador perceiving, ſaid to him; ſir, let it not diſpleaſe you; why do not you ſay ſomewhat, that I may report? He anſwered, report to your lord, that there are of the *Graecians* that can hold their peace.

231. The *Lacedaemonians* had in cuſtom to ſpeak very ſhort, which being an empire, they might do at pleaſure: but after their defeat at *Leuctra*, in an aſſembly of the *Graecians*, they made a long invective againſt *Epaminondas*; who ſtood up, and ſaid no more than this; I am glad we have brought you to ſpeak long.

232. FABIUS *Maximus* being reſolved to draw the war in length, ſtill waited upon *Hannibal*'s progreſs to curb him; and for that purpoſe he encamped upon the high ground: but *Terentius* his colleague fought with *Hannibal*, and was in great peril of overthrow; but then *Fabius* came down from the high grounds, and got the day. Whereupon *Hannibal* ſaid; that he did ever think that the ſame cloud that hanged upon the hills, would at one time or other give a tempeſt.

233. HANNO the *Carthaginian* was ſent commiſſioner by the ſtate, after the ſecond *Carthaginian* war, to ſupplicate for peace, and in the end obtained it: yet one of the ſharper ſenators ſaid, you have often broken with us the peaces, whereunto you have been ſworn; I pray, by what god will you ſwear?

ſwear? *Hanno* anſwered; by the ſame gods that have puniſhed the former perjury ſo ſeverely.

234. CAESAR, when he firſt poſſeſſed *Rome*, *Pompey* being fled, offered to enter the ſacred treaſury to take the moneys that were there ſtored: and *Metellus*, tribune of the people, did forbid him: and when *Metellus* was violent in it, and would not deſiſt, *Caeſar* turned to him, and ſaid; preſume no farther, or I will lay you dead. And when *Metellus* was with thoſe words ſomewhat aſtoniſhed, *Caeſar* added; young man, it had been eaſier for me to do this, than to ſpeak it.

235. CAIUS *Marius* was general of the *Romans* againſt the *Cimbers*, who came with ſuch a ſea of people upon *Italy*. In the fight there was a band of the *Cadurcians* of a thouſand, that did notable ſervice; whereupon, after the fight, *Marius* did deniſon them all for citizens of *Rome*, though there was no law to warrant it. One of his friends did preſent it unto him; that he had tranſgreſſed the law, becauſe that privilege was not to be granted, but by the people. Whereunto *Marius* anſwered; that for the noiſe of arms he could not hear the laws.

236. POMPEY did conſummate the war againſt *Sertorius*, when *Metellus* had brought the enemy ſomewhat low. He did alſo conſummate the war againſt the fugitives, whom *Craſſus* had before defeated in a great battel. So when *Lucullus* had had great and glorious victories againſt *Mithridates* and *Tigranes*; yet *Pompey*, by means his friends made, was ſent to put an end to that war. Whereupon *Lucullus* taking indignation, as a diſgrace offered to himſelf, ſaid; that *Pompey* was a carrion crow, when others had ſtrucken down the bodies, then *Pompey* came and preyed upon them.

237. ANTISTHENES being aſked of one what learning was moſt neceſſary for man's life? Anſwered; to unlearn that which is nought.

238. ALEXANDER viſited *Diogenes* in his tub; and when he aſked him, what he would deſire of him? *Diogenes* anſwered; that you would ſtand a little aſide, that the ſun may come to me.

239. THE ſame *Diogenes*, when mice came about him, as he was eating, ſaid; I ſee, that even *Diogenes* nouriſheth paraſites.

240. HIERO viſited by *Pythagoras*, aſk'd him; of what condition he was? *Pythagoras* anſwered; ſir, I know you have been at the *Olympian* games: yes, ſaith *Hiero*. Thither (ſaith *Pythagoras*) come ſome to win the prizes. Some come to ſell their merchandize, becauſe it is a kind of mart of all *Greece*. Some come to meet their friends, and to make merry; becauſe of the great confluence of all ſorts. Others come only to look on. I am one of them that come to look on; meaning it, of philoſophy, and the contemplative life.

241. HERACLITUS the obſcure ſaid; the dry light is the beſt ſoul: meaning, when the faculties intellectual are in vigour, not drenched, or as it were blooded by the affections.

242. ONE of the philoſophers was aſked; what a wiſe man differ'd from a fool? He anſwered, ſend them both naked to thoſe that know them not, and you ſhall perceive.

243. THERE was a law made by the *Romans*, againſt the bribery and extortion of the governours of provinces. *Cicero* ſaith in a ſpeech of his to the people; that he thought the provinces would petition to the ſtate of *Rome* to have that law repealed. For (ſaith he) before the governours did bribe and extort, as much as was ſufficient for themſelves: but now they bribe

bribe and extort as much, as may be enough, not only for themſelves, but for the judges, and jurors, and magiſtrates.

244. ARISTIPPUS ſailing in a tempeſt, ſhewed ſigns of fear. One of the ſeamen ſaid to him, in an inſulting manner; we that are plebeians are not troubled; you that are a philoſopher, are afraid. *Ariſtippus* anſwered; that there is not the like wager upon it, for you to periſh and for me.

245. THERE was an orator that defended a cauſe of *Ariſtippus*, and prevailed. Afterwards he aſked *Ariſtippus*; now, in your diſtreſs, what, did *Socrates* do you good? *Ariſtippus* anſwered; thus, in making that which you ſaid of me to be true.

246. THERE was an *Epicurean* vaunted, that divers of other ſects of philoſophers did after turn *Epicureans*; but there was never any *Epicureans* that turned to any other ſect. Whereupon a philoſopher that was of another ſect, ſaid; the reaſon was plain, for that cocks may be made capons, but capons could never be made cocks.

247. CHILON would ſay, that gold was tryed with the touchſtone, and men with gold.

248. SIMONIDES being aſked of *Hiero* what he thought of God? aſked a ſeven-night's time to conſider of it: and at the ſeven-night's end, he aſked a fort-night's time; at the fort-night's end, a month. At which *Hiero* marvelling, *Simonides* anſwered; that the longer he thought upon the matter, the more difficult he found it.

249. A *Spaniard* was cenſuring to a *French* gentleman the want of devotion amongſt the *French*; in that, whereas in *Spain*, when the ſacrament goes to the ſick, any that meets with it, turns back and waits upon it to the houſe whither it goes; but in *France*, they only do reverence, and paſs by. But the *French* gentlemen anſwered him, there is reaſon for it; for here with us, *Chriſt* is ſecure amongſt his friends; but in *Spain* there be ſo many *Jews* and *Morano's*, that it is not amiſs for him to have a convoy.

250. Mr. *Popham*, (afterwards lord chief juſtice *Popham*) when he was ſpeaker; and the houſe of commons had ſate long, and done in effect nothing; coming one day to queen *Elizabeth*, ſhe ſaid to him; now, Mr. Speaker, what hath paſſed in the commons houſe? He anſwered, if it pleaſe your majeſty, ſeven weeks.

251. THEMISTOCLES in his lower fortune was in love with a young gentleman who ſcorned him; but when he grew to his greatneſs, which was ſoon after, he ſought him: *Themiſtocles* ſaid; we are both grown wiſe, but too late.

252. BION was ſailing, and there fell out a great tempeſt; and the mariners that were wicked and diſſolute fellows, called upon the gods; but *Bion* ſaid to them, peace, let them not know you are here.

253. THE *Turks* made an expedition into *Perſia*; and becauſe of the ſtrait jaws of the mountains of *Armenia*, the baſhaw conſulted which way they ſhould get in. One that heard the debate ſaid, here's much ado how you ſhall get in; but I hear no body take care how you ſhould get out.

254. PHILIP king of *Macedon* maintained arguments with a muſician in points of his art, ſomewhat peremptorily; but the muſician ſaid to him, God forbid, ſir, your fortune were ſo hard, that you ſhould know theſe things better than my ſelf.

255. ANTALCIDAS, when an *Athenian* ſaid to him, ye *Spartans* are unlearned; ſaid again, true, for we have learned no evil nor vice of you.

256. PACE,

256. PACE, the bitter fool, was not ſuffered to come at queen *Elizabeth*, becauſe of his bitter humour. Yet at one time, ſome perſuaded the queen that he ſhould come to her; undertaking for him, that he ſhould keep within compaſs: ſo he was brought to her, and the queen ſaid; come on *Pace*; now we ſhall hear of our faults. Saith *Pace*; I do not uſe to talk of that that all the town talks of.

257. BISHOP *Latimer* ſaid in a ſermon at court, that he heard great ſpeech that the king was poor; and many ways were propounded to make him rich: for his part he had thought of one way, which was, that they ſhould help the king to ſome good office, for all his officers were rich.

258. AFTER the defeat of *Cyrus* the younger, *Falinus* was ſent by the king to the *Grecians*, (who had for their part rather victory than otherwiſe) to command them to yield their arms; which when it was denied, *Falinus* ſaid to *Clearchus*; well then, the king lets you know, that if you remove from the place where you are now encamped, it is war: if you ſtay, it is truce. What ſhall I ſay you will do? *Clearchus* anſwered, it pleaſeth us, as it pleaſeth the king. How is that? ſaith *Falinus*. Saith *Clearchus*, if we remove, war; if we ſtay, truce: and ſo would not diſcloſe his purpoſe.

259. ALCIBIADES came to *Pericles*, and ſtayed a while ere he was admitted. When he came in, *Pericles* civilly excuſed it, and ſaid; I was ſtudying how to give mine account. But *Alcibiades* ſaid to him, if you will be ruled by me, ſtudy rather how to give no account.

260. MENDOZA that was vice-roy of *Peru*, was wont to ſay, that the government of *Peru* was the beſt place that the king of *Spain* gave, ſave that it was ſomewhat too near *Madrid*.

261. WHEN *Veſpaſian* paſſed from *Jewry*, to take upon him the empire, he went by *Alexandria*, where remained two famous philoſophers, *Apollonius* and *Euphrates*. The emperor heard the diſcourſe, touching matter of ſtate, in the preſence of many. And when he was weary of them, he brake off, and in a ſecret deriſion, finding their diſcourſes but ſpeculative, and not to be put in practice, ſaid; Oh that I might govern wiſe men, and wiſe men govern me.

262. CARDINAL *Ximenes*, upon a muſter, which was taken againſt the *Moors*, was ſpoken to by a ſervant of his to ſtand a little out of the ſmoke of the harquebuſs; but he ſaid again, that that was his incenſe.

263. NERO was wont to ſay of his maſter *Seneca*, that his ſtyle was like mortar without lime.

264. AUGUSTUS *Caeſar*, out of great indignation againſt his two daughters, and *Poſthumus Agrippa*, his grand-child; whereof the two firſt were infamous, and the laſt otherwiſe unworthy; would ſay, that they were not his ſeed, but ſome impoſthumes that had broken from him.

265. A ſeaman coming before the judges of the admiralty for admittance into an office of a ſhip bound for the *Indies*, was by one of the judges much ſlighted, as an inſufficient perſon for that office he ſought to obtain; the judge telling him, that he believed he could not ſay the points of his compaſs. The ſeaman anſwered; that he could ſay them, under favour, better than he could ſay his *Pater noſter*. The judge replied; that he would wager twenty ſhillings with him upon that. The ſeaman taking him up, it came to trial: and the ſeaman began, and ſaid all the points of his compaſs very exactly; the judge likewiſe ſaid his *Pater noſter*: and when he had finiſhed it, he required the wager according to agreement; becauſe the ſeaman was

to

to ſay his compaſs better than he his *Pater noſter*, which he had not performed. Nay, I pray ſir, hold, (quoth the ſeaman) the wager is not finiſhed; for I have but half done: and ſo he immediately ſaid his compaſs backward very exactly; which the judge failing of in his *Pater-noſter*, the ſeaman carried away the prize.

266. THERE was a conſpiracy againſt the emperor *Claudius* by *Scribonianus*, examined in the ſenate; where *Claudius* ſate in his chair, and one of his freed ſervants ſtood at the back of his chair. In the examination, that freed ſervant, who had much power with *Claudius*, very ſaucily, had almoſt all the words: and amongſt other things, he aſked in ſcorn one of the examinates, who was likewiſe a freed ſervant of *Scribonianus*; I pray ſir, if *Scribonianus* had been emperor, what would you have done? He anſwered, I would have ſtood behind his chair and held my peace.

267. ONE was ſaying, that his great grand-father, and grand-father, and father, died at ſea: ſaid another that heard him; and I were as you, I would never come at ſea. Why, (ſaith he) where did your great grand-father, and grand-father, and father die? He anſwered; where, but in their beds? He anſwered; and I were as you, I would never come in bed.

268. THERE was a diſpute, whether great heads or little heads had the better wit? And one ſaid, it muſt needs be the little; for that it is a maxim, *Omne majus continet in ſe minus.*

269. SIR *Thomas More*, when the counſel of the party preſſed him for a longer day to perform the decree, ſaid; take ſaint *Barnaby*'s-day, which is the longeſt day in the year. Now ſaint *Barnaby*'s-day was within few days following.

270. ONE of the fathers ſaith, that there is but this difference between the death of old men and young men; that old men go to death, and death comes to young men.

271. CASSIUS, after the defeat of *Craſſus* by the *Parthians*, whoſe weapons were chiefly arrows, fled to the city of *Charras*; where he durſt not ſtay any time, doubting to be purſued and beſieged; he had with him an aſtrologer, who ſaid to him, Sir, I would not have you go hence, while the moon is in the ſign of *Scorpio*. *Caſſius* anſwered, I am more afraid of that of *Sagittarius*.

272. JASON the *Theſſalian* was wont to ſay, that ſome things muſt be done unjuſtly, that many things may be done juſtly.

273. DEMETRIUS king of *Macedon*, would at times retire himſelf from buſineſs, and give himſelf wholly to pleaſures. One of thoſe his retirings, giving out that he was ſick, his father *Antigonus* came on the ſudden to viſit him; and met a fair dainty youth coming out of his chamber. When *Antigonus* came in, *Demetrius* ſaid; Sir, the fever left me right now. *Antigonus* replied, I think it was he that I met at the door.

274. CATO *major* would ſay, that wiſe men learned more by fools, than fools by wiſe men.

275. WHEN it was ſaid to *Anaxagoras*; the *Athenians* have condemned you to die; he ſaid again, And nature them.

276. ALEXANDER, when his father wiſhed him to run for the prize of the race of the *Olympian* games, (for he was very ſwift) anſwered; he would, if he might run with kings.

277. ANTIGONUS uſed often to go diſguiſed, and to liſten at the tents of his ſoldiers; and at a time heard ſome that ſpoke very ill of him. Where-

upon he opened the tent a little, and ſaid to them; if you would ſpeak ill of me, you ſhould go a little farther off.

278. ARISTIPPUS ſaid; that thoſe that ſtudied particular ſciences, and neglected philoſophy; were like *Penelope*'s woers, that made love to the waiting woman.

279. THE embaſſadors of *Aſia minor* came to *Antonius*, after he had impoſed upon them a double tax, and ſaid plainly to him; that if he would have two tributes in one year, he muſt give them two ſeed-times, and two harveſts.

280. AN orator of *Athens* ſaid to *Demoſthenes*; the *Athenians* will kill you if they wax mad: *Demoſthenes* replied, and they will kill you if they be in good ſenſe.

281. EPICTETUS uſed to ſay; that one of the vulgar, in any ill that happens to him, blames others; a novice in philoſophy blames himſelf; and a philoſopher blames neither the one nor the other.

282. CAESAR, in his book that he made againſt *Cato*, (which is loſt) did write to ſhew the force of opinion and reverence, of a man that had once obtained a popular reputation; that there were ſome that found *Cato* drunk, and were aſhamed inſtead of *Cato*.

283. THERE was a nobleman ſaid of a great counſellor, that he would have made the worſt farrier in the world; for he never ſhod horſe, but he cloyed him: for he never commended any man to the king for ſervice, or upon occaſion of ſute, or otherwiſe, but that he would come in, in the end, with a but; and drive in a nail to his diſadvantage.

284. DIOGENES called an ill phyſician, cock. Why? (ſaith he.) *Diogenes* anſwered; becauſe when you crow, men uſe to riſe.

285. THERE was a gentleman fell very ſick, and a friend of his ſaid to him; ſurely, you are in danger; I pray ſend for a phyſician. But the ſick man anſwered; it is no matter, for if I die, I will die at leiſure.

286. CATO the elder, what time many of the *Romans* had ſtatues erected in their honour, was aſked by one in a kind of wonder, why he had none? He anſwered, he had much rather men ſhould aſk and wonder why he had no ſtatue, than why he had a ſtatue.

287. A certain friend of Sir *Thomas More*'s, taking great pains about a book, which he intended to publiſh, (being well conceited of his own wit, which no man elſe thought worthy of commendation) brought it to Sir *Thomas More* to peruſe it, and paſs his judgment upon it; which he did: and finding nothing therein worthy the preſs, he ſaid to him with a grave countenance; that if it were in verſe it would be more worthy. Upon which words, he went immediately and turned it into verſe, and then brought it to Sir *Thomas* again; who looking thereon, ſaid ſoberly; Yes marry, now it is ſomewhat; for now it is rhime; whereas before it was neither rhime nor reaſon.

288. SIR *Henry Wotton* uſed to ſay; that criticks were like bruſhers of noblemens clothes.

289. HANNIBAL ſaid of *Fabius Maximus*, and of *Marcellus*, whereof the former waited upon him, that he could make no progreſs, and the latter had many ſharp fights with him; that he feared *Fabius* like a tutor, and *Marcellus* like an enemy.

290. WHEN king *Edward* the ſecond was amongſt his torturers, who hurried him to and fro, that no man ſhould know where he was, they ſet him down upon a bank: and one time the more to diſguiſe his face,

ſhaved him, and waſhed him with cold water of a ditch by: the king ſaid; Well, yet I will have warm water for my beard: and ſo ſhed abundance of tears.

291. ONE of the ſeven was wont to ſay; that laws were like cobwebs; where the ſmall flies were caught, and the great brake through.

292. LEWIS the eleventh of *France*, having much abated the greatneſs and power of the peers, nobility, and court of parliament, would ſay, that he had brought the crown out of ward.

293. THERE was a cowardly *Spaniſh* ſoldier, that in a defeat the *Moors* gave, ran away with the foremoſt. Afterwards when the army generally fled, this ſoldier was miſſing. Whereupon it was ſaid by ſome, that he was ſlain. No ſure (ſaith one) he is alive; for the *Moors* eat no hares fleſh.

294. A gentleman that was punctual of his word, and loved the ſame in others; when he heard that two perſons had agreed upon a meeting about ſerious affairs, at a certain time and place; and that the one party failed in the performance, or neglected his hour; would uſually ſay of him, he is a young man then.

295. ANACHARSIS would ſay, concerning the popular eſtates of *Graecia*, that he wondred how at *Athens* wiſe men did propoſe, and fools diſpoſe.

296. HIS lordſhip, when he had finiſhed this collection of apophthegms, concluded thus: Come now all is well: they ſay, he is not a wiſe man that will loſe his friend for his wit; but he is leſs a wiſe man, that will loſe his friend for another man's wit.

## *Apophthegms contained in the Original Edition in Octavo, (which later Copies have intirely ſuppreſſed) and which were printed in the laſt Folio Edition, but not in the proper place.*

1. WHEN Queen *Elizabeth* had advanced *Raleigh*, ſhe was one day playing on the virginals, and my lord of *Oxford*, and another nobleman ſtood by. It fell out ſo, that the ledge, before the jacks, was taken away, ſo as the jacks were ſeen: my lord of *Oxford*, and the other nobleman ſmiled, and a little whiſpered. The queen marked it, and would needs know, *what the matter was?* My lord of *Oxford* anſwered; *That they ſmiled to ſee, that when jacks went up, heads went down.*

22. SIR *Thomas More*, (who was a man, in all his life-time, that had an excellent vein in jeſting) at the very inſtant of his death, having a pretty long beard, after his head was upon the block, lift it up again, and gently drew his beard aſide, and ſaid; *This hath not offended the king.*

27. DEMONAX the philoſopher, when he died, was aſked touching his burial. He anſwered, *Never take care for burying me, for ſtink will bury me.* He that aſk'd him, ſaid again; *Why, would you have your body left to dogs and ravens to feed upon? Demonax* anſwered; *Why, what great hurt is it, if having ſought to do good, when I lived, to men; my body do ſome good to beaſts, when I am dead?*

30. PHOCYON, the *Athenian*, (a Man of great ſeverity, and no ways flexible to the will of the people) one day, when he ſpake to the People, in one part of his ſpeech, was applauded: whereupon, he turned to one of his friends, and aſked; *What have I ſaid amiſs?*

34. BION was wont to ſay; *That* Socrates, *of all the lovers of* Alcibiades, *only held him by the ears.*

37. There was a philoſopher about *Tiberius*, that looking into the nature of *Caius*, ſaid of him; *That he was mire mingled with blood.*

42. There was a biſhop, that was ſomewhat a delicate Perſon, and bathed twice a day. A friend of his ſaid to him; *My lord, why do you bathe twice a day?* The biſhop anſwered; *Becauſe I cannot conveniently bathe thrice.*

89. WHEN Sir *Thomas More* was lord chancellor, he did uſe, at maſs, to ſit in the chancel; and his lady in a pew. And becauſe the pew ſtood out of ſight, his gentleman-uſher, ever after ſervice came to the lady's pew, and ſaid; *Madam, my lord is gone.* So when the chancellor's place was taken from him, the next time they went to church, Sir *Thomas* himſelf came to his lady's pew, and ſaid; *Madam, my lord is gone.*

104. A *Graecian* captain adviſing the confederates, that were united againſt the *Lacedaemonians*, touching their enterpriſe, gave opinion, that they ſhould go directly upon *Sparta*, ſaying; *That the ſtate of* Sparta *was like rivers; ſtrong when they had run a great way, and weak towards their head.*

108. ONE was examined, upon certain ſcandalous words ſpoken againſt the king. He confeſſed them, and ſaid; *It is true, I ſpake them, and if the wine had not failed, I had ſaid much more.*

110 TRAJAN would ſay, *That the king's exchequer was like the ſpleen; for when that did ſwell, the whole body did pine.*

111. CHARLES the bald, allowed one, whoſe name was *Scottus*, to ſit at the table with him, for his pleaſure. *Scottus* ſate on the other ſide of the table. One time the king being merry with him, ſaid to him; *What is there between Scot and Sot? Scottus* anſwered; *The table only.*

113. There was a marriage made between a widow of great wealth, and a gentleman of great houſe, that had no eſtate or means. *Jack Roberts* ſaid; *That marriage was like a black pudding; the one brought blood, and the other brought ſewet and oatmeal.*

149. CROESUS ſaid to *Cambyſes*, *That peace was better than war; becauſe in peace the ſons did bury their fathers, but in wars the fathers did bury their ſons.*

154. CARVAJAL, when he was drawn to execution, being fourſcore and five years old, and laid upon the hurdle, ſaid; *What! young in cradle, old in cradle!*

161. DIOGENES was aſked in a kind of ſcorn; *What was the matter, that philoſophers haunted rich men, and not rich men philoſophers?* he anſwered; *Becauſe the one knew what they wanted, the other did not.*

162. DEMETRIUS, king of *Macedon*, had a petition offered him diverſe times by an old woman, and ſtill anſwered; *he had no leiſure.* Whereupon, the woman ſaid aloud; *Why then give over to be king.*

175. THERE were two gentlemen, otherwiſe of equal degree, ſave that the one was of the ancienter houſe. The other, in courteſy, aſked his hand to kiſs: which he gave him; and he kiſs'd it: But ſaid withal, to right himſelf, by way of friendſhip, *Well, I and you, againſt any two of them:* putting himſelf firſt.

198. THEMISTOCLES would ſay of himſelf; *That he was like a plane-tree, that in tempeſts men fled to him, and in fair weather, men were ever cropping his leaves.*

199. THEMISTOCLES ſaid of ſpeech; *That it was like Arras, that ſpread abroad ſhews fair images, but contracted is but like packs.*

211. LYCUR-

211. LYCURGUS would ſay of divers of the heroes of the heathen; *That he wondered that men ſhould mourn upon their days, for them, as mortal men, and yet ſacrifice to them as gods.*

213. THERE is an eccleſiaſtical writer of the papiſts, to prove antiquity of confeſſion, in the form that it now is, doth note, in very ancient times, even in the primitive times, amongſt other foul ſlanders ſpread againſt the chriſtians, one was; *That they did adore the genitories of their prieſts. Which* (he ſaith) *grew from the poſture of the confeſſant, and the prieſt in confeſſion: which is, that the confeſſant kneels down, before the prieſt ſitting in a raiſed chair above him.*

216. FABRICIUS, in conference with *Pyrrhus*, was tempted to revolt to him; *Pyrrhus* telling him, that he ſhould be partner of his fortunes, and ſecond perſon to him. But *Fabricius* anſwered, in a ſcorn, to ſuch a motion; *Sir, that would not be good for your ſelf: for if the* Epirotes *once know me, they will rather deſire to be governed by me than by you.*

221. THALES ſaid; *That life and death were all one.* One that was preſent aſk'd him; *Why do not you die then? Thales* ſaid again; *Becauſe they are all one.*

223. AN *AEgyptian* prieſt having conference with *Solon*, ſaid to him; *You* Graecians *are ever children; you have no knowledge of antiquity, nor antiquity of knowledge.*

227. DIOGENES was one day in the market-place, with a candle in his hand, and being aſk'd; *What he ſought?* he ſaid, *He ſought a man.*

228. BIAS being aſked; *How a man ſhould order his life?* anſwered; *As if a man ſhould live long, or die quickly.*

229. QUEEN *Elizabeth* was entertained by my Lord *Burleigh* at *Theobalds:* and at her going away, my lord obtained of the Queen, to make ſeven knights. They were gentlemen of the country, of my lord's friends and neighbours. They were placed in a rank, as the queen ſhould paſs by the hall; and to win antiquity of knighthood, in order, as my lord favoured; though indeed the more principal gentlemen were placed loweſt. The queen was told of it, and ſaid nothing; but when ſhe went along, ſhe paſſed them all by, as far as the ſkreen, as if ſhe had forgot it: and when ſhe came to the ſkreen, ſhe ſeemed to take herſelf with the manner, and ſaid, *I had almoſt forgot what I promiſed.* With that ſhe turned back, and knighted the loweſt firſt, and ſo upward. Whereupon Mr. *Stanhope* of the privy-chamber, a while after told her; *Your majeſty was too fine for my lord* Burleigh. She anſwered; *I have but fulfilled the ſcripture; the firſt ſhall be laſt, and the laſt firſt.*

235. SIR *Fulke Grevill* had much and private acceſs to queen *Elizabeth*, which he uſed honourably, and did many men good, yet he would ſay merrily of himſelf; *That he was like* Robin Goodfellow; *for when the maids ſpilt the milk-pans, or kept any racket, they would lay it upon* Robin: *ſo what tales, the ladies, about the queen, told her, or other bad offices that they did, they would put it upon him.*

240. THERE was a politick ſermon, that had no divinity in it, was preached before the king. The king, as he came forth, ſaid to Biſhop *Andrews*; *Call you this a ſermon?* the biſhop anſwered; *And it pleaſe your majeſty, by a charitable conſtruction, it may be a ſermon.*

244. HENRY NOEL would ſay; *That courtiers were like faſting days; they were next the holy days, but in themſelves, they were the moſt meagre days of the week.*

247. CATO

247. CATO ſaid; *The beſt way, to keep good acts in memory, was to refreſh them with new.*

259. ARISTIPPUS ſaid; *He took money of his friends, not ſo much to uſe it himſelf, as to teach them how to beſtow their money.*

260. A ſtrumpet ſaid to *Ariſtippus*; *That ſhe was with child by him:* he anſwered; *You know that no more, than if you went through a hedge of thorns, you could ſay, this thorn prick'd me.*

263. DEMOCRITUS ſaid; *That truth did lie in profound pits, and when it was got, it needed much refining.*

266. DIOGENES ſaid of a young man that danced daintily, and was much commended; *The better, the worſe.*

271. THERE was a nobleman that was lean of viſage, but immediately after his marriage he grew pretty plump and fat. One ſaid to him; *Your lordſhip doth contrary to other married men; for they at the firſt wax lean, and you wax fat.* Sir *Walter Raleigh* ſtood by, and ſaid; *Why, there is no beaſt, that if you take him from the common, and put him into the ſeveral, but he will wax fat.*

272. DIOGENES ſeeing one that was a baſtard, caſting ſtones among the people, bad him take heed, *he hit not his father.*

275. IT was ſaid by many concerning the canons of the council of *Trent*; *That we are beholden to* Ariſtotle *for many articles of our faith.*

## *Certain Apophthegms of the Lord* Bacon's, *firſt publiſhed in his Remains.*

1. PLUTARCH ſaid well, it is otherwiſe in a common-wealth of men than of bees: The hive of a city or kingdom is in beſt condition, when there is leaſt of noiſe or buz in it.

2. THE ſame *Plutarch* ſaid, of men of weak abilities ſet in great place, that they were like little ſtatues ſet on great baſes, made to appear the leſs by their advancement.

3. HE ſaid again; good fame is like fire. When you have kindled it, you may eaſily preſerve it; but if once you extinguiſh it, you will not eaſily kindle it again; at leaſt, not make it burn as bright as it did.

4. QUEEN *Elizabeth* ſeeing Sir *Edward* —— in her garden, look'd out at her window, and aſked him in *Italian*, what does a man think of when he thinks of nothing? Sir *Edward* (who had not had the effect of ſome of the queen's grants ſo ſoon as he had hoped and deſired) pauſed a little; and then made anſwer, Madam, he thinks of a woman's promiſe. The queen ſhrunk in her head, but was heard to ſay, Well, Sir *Edward*, I muſt not confute you. Anger makes dull men witty, but it keeps them poor.

5. WHEN any great officer, eccleſiaſtical or civil, was to be made, the queen would inquire after the piety, integrity, learning of the man. And when ſhe was ſatisfied in theſe qualifications, ſhe would conſider of his perſonage. And upon ſuch an occaſion ſhe pleas'd once to ſay to me, *Bacon*, how can the magiſtrate maintain his authority when the man is deſpis'd?

6. IN eighty eight, when the queen went from *Temple-bar* along *Fleet-ſtreet*, the lawyers were rank'd on one ſide, and the companies of the city on the other; ſaid maſter *Bacon* to a lawyer that ſtood next him: Do but obſerve the courtiers; if they bow firſt to the citizens, they are in debt; if firſt to us, they are in law.

7. KING

7. KING *James* was wont to be very earneſt with the countrey gentlemen to go from *London* to their countrey houſes. And ſometimes he would ſay thus to them; Gentlemen, at *London*, you are like ſhips at ſea, which ſhew like nothing; but in your countrey villages, you are like ſhips in a river, which look like great things.

8. SOON after the death of a great officer, who was judged no advancer of the king's matters; the king ſaid to his ſolicitor *Bacon*, who was his kinſman; Now tell me truly, what ſay you of your couſin that is gone? Mr. *Bacon* anſwered, Sir, ſince your majeſty doth charge me, I'll e'en deal plainly with you, and give you ſuch a character of him, as if I were to write his ſtory. I do think he was no fit counſellor to make your affairs better: but yet he was fit to have kept them from growing worſe. The king ſaid, On my ſo'l, man, in the firſt thou ſpeakeſt like a true man, and in the latter like a kinſman.

9. KING *James*, as he was a prince of great judgment, ſo he was a prince of a marvellous pleaſant humour; and there now come into my mind two inſtances of it. As he was going through *Luſen* by *Greenwich*, he aſk'd what town it was? They ſaid *Luſen*. He aſk'd a good while after, what town is this we are now in? They ſaid, ſtill 'twas *Luſen*. On my ſo'l, ſaid the king, I will be king of *Luſen*.

10. IN ſome other of his progreſſes, he aſk'd how far 'twas to a town whoſe name I have forgotten. They ſaid, ſix miles. Half an hour after he aſk'd again. One ſaid ſix miles and an half. The king alighted out of his coach, and crept under the ſhoulder of his led horſe. And when ſome aſk'd his majeſty what he meant? I muſt ſtalk, ſaid he, for yonder town is ſhy, and flies me.

11. COUNT *Gondomar* ſent a complement to my lord *St. Alban*, wiſhing him a good Eaſter. My lord thank'd the meſſenger, and ſaid, he could not at preſent requite the count better than in returning him the like; that he wiſhed his lordſhip a good Paſſover.

12. My lord chancellor *Elſmere*, when he had read a petition which he diſlik'd, would ſay; What, you would have my hand to this now? And the party anſwering, yes: he would ſay farther, Well, ſo you ſhall; nay, you ſhall have both my hands to it. And ſo would, with both his hands, tear it in pieces.

13. SIR *Francis Bacon* was wont to ſay of an angry man who ſuppreſſed his paſſion, that he thought worſe than he ſpake: and of an angry man that would chide, that he ſpoke worſe than he thought.

14. HE was wont alſo to ſay, that power in an ill man, was like the power of a black witch; he could do hurt, but no good with it. And he would add, that the magicians could turn water into blood, but could not turn the blood again to water.

15. WHEN Mr. Attorney *Coke*, in the exchequer, gave high words to Sir *Francis Bacon*, and ſtood much upon his higher place; ſir *Francis* ſaid to him, Mr. Attorney, the leſs you ſpeak of your own greatneſs, the more I ſhall think of it; and the more, the leſs.

16. SIR *Francis Bacon* coming into the earl of *Arundel*'s garden, where there were a great number of ancient ſtatues of naked men and women, made a ſtand, and as aſtoniſh'd, cried out, the reſurrection.

17. SIR *Francis Bacon* (who was always for moderate counſels) when one was ſpeaking of ſuch a reformation of the church of *England*, as would in effect make it no church; ſaid thus to him, Sir, the ſubject we talk of is the

eye

eye of *England*; and if there be a ſpeck or two in the eye, we endeavour to take them off; but he were a ſtrange oculiſt who would pull out the eye.

18. The ſame Sir *Francis Bacon* was wont to ſay, that thoſe who left uſeful ſtudies for uſeleſs ſcholaſtic ſpeculations, were like the *Olympick* gameſters, who abſtain'd from neceſſary labours, that they might be fit for ſuch as were not ſo.

19. He likewiſe often uſed this compariſon: (*a*) the empirical philoſophers are like to piſmires; they only lay up and uſe their ſtore. The rationaliſts are like to ſpiders; they ſpin all out of their own bowels. But give me a philoſopher, who like the bee hath a middle faculty, gathering from abroad, but digeſting that which is gathered by his own virtue.

20. The lord *St. Alban*, who was not over-haſty to raiſe theories, but proceeded ſlowly by experiments, was wont to ſay to ſome philoſophers, who would not go his pace; Gentlemen, nature is a labyrinth, in which the very haſte you move with, will make you loſe your way.

21. The ſame lord, when he ſpoke of the *Dutchmen*, uſed to ſay, that we could not abandon them for our ſafety, nor keep them for our profit. And ſometimes he would expreſs the ſame ſenſe in this manner; we hold the *Belgic* lion by the ears.

22. The ſame lord, when a gentleman ſeem'd not much to approve of his liberality to his retinue, ſaid to him; Sir, I am all of a piece; if the head be lifted up, the inferior parts of the body muſt too.

23. The lord *Bacon* was wont to commend the advice of the plain old man at *Buxton* that ſold beſoms: a proud lazy young fellow came to him for a beſom upon truſt; to whom the old man ſaid; Friend, haſt thou no money? borrow of thy back, and borrow of thy belly, they'll ne'er aſk thee again, I ſhall be dunning thee every day.

24. Jack Weeks ſaid of a great man (juſt then dead) who pretended to ſome religion, but was none of the beſt livers; Well, I hope he is in heaven. Every man thinks as he wiſhes; but if he be in heaven, 'twere pity it were known.

(*a*) See the ſubſtance of this in *Nov. Org.* Vol. I. & *inter Cogitata & Viſa.* Vol. II.

ORNA-

# *ORNAMENTA RATIONALIA:*

OR

# ELEGANT SENTENCES,

## Some made, others collected by the Lord *BACON*; and by him put under the abovesaid title.

### Collected out of the *Mimi* of *Publius*, and published in the *Remains*.

1. ALEATOR, *quanto in arte est melior, tanto est nequior:* a gamester, the greater master he is in his art, the worse man he is.

2. ARCUM, *intenso frangit; animum, remisso:* much bending breaks the bow; much unbending, the mind.

3. BIS *vincit, qui se vincit in victoria:* he conquers twice, who upon victory overcomes himself.

4. CUM *vitia prosint, peccat, qui recte facit:* if vices were upon the whole matter profitable, the virtuous man would be the sinner.

5. BENE *dormit, qui non sentit, quod male dormiat:* he sleeps well, who feels not that he sleeps ill.

6. DELIBERARE *utilia, mora est tutissima:* to deliberate about useful things, is the safest delay.

7. DOLOR *decrescit, ubi quo crescat non habet:* the flood of grief decreaseth, when it can swell no higher.

8. ETIAM *innocentes cogit mentiri dolor:* pain makes even the innocent man a lyar.

9. ETIAM *celeritas in desiderio, mora est:* in desire, swiftness it self is delay.

10. ETIAM *capillus unus habet umbram suam:* the smallest hair casts a shadow.

11. FIDEM *qui perdit, quo se servat in reliquum?* he that has lost his faith, what has he left to live on?

12. FORMOSA *facies muta commendatio est:* a beautiful face is a silent commendation.

13. FORTUNA *nimium quem fovet, stultum facit:* fortune makes him a fool, whom she makes her darling.

14. FORTUNA *obesse nulli contenta est semel:* fortune is not content to do a man but one ill turn.

15. FACIT *gratum fortuna, quem nemo videt:* the fortune which no body sees, makes a man happy and unenvied.

16. Heu! *quam miſerum eſt ab illo laedi, de quo non poſſis queri:* O! what a miſerable thing 'tis to be hurt by ſuch a one of whom 'tis in vain to complain.

17. Homo *toties moritur quoties amittit ſuos:* a man dies as often as he loſes his friends.

18. *Haeredis fletus ſub perſona riſus eſt:* the tears of an heir are laughter under a vizard.

19. Jucundum *nihil eſt, niſi quod reficit varietas:* nothing is pleaſant, to which variety does not give a reliſh.

20. Invidiam *ferre, aut fortis, aut felix poteſt:* he may bear envy, who is either couragious or happy.

21. In *malis ſperare bonum, niſi innocens, nemo poteſt:* none but a virtuous man can hope well in all circumſtances.

22. In *vindicando, criminoſa eſt celeritas:* in taking revenge, the very haſte we make is criminal.

23. In *calamitoſo riſus etiam injuria eſt:* when men are in calamity, if we do but laugh we offend.

24. Improbe *Neptunum accuſat, qui iterum naufragium facit:* he accuſeth *Neptune* unjuſtly, who makes ſhipwreck a ſecond time.

25. Multis *minatur, qui uni facit injuriam:* he that injures one, threatens an hundred.

26. Mora *omnis ingrata eſt, ſed facit ſapientiam:* all delay is ungrateful, but we are not wiſe without it.

27. Mori *eſt felicis antequam mortem invocet:* happy he who dies ere he calls for death to take him away.

28. Malus *ubi bonum ſe ſimulat, tunc eſt peſſimus:* an ill man is always ill; but he is then worſt of all, when he pretends to be a ſaint.

29. Magno *cum periculo cuſtoditur, quod multis placet:* lock and key will ſcarce keep that ſecure, which pleaſes every body.

30. Male *vivunt qui ſe ſemper victuros putant:* they think ill, who think of living always.

31. Male *ſecum agit aeger, medicum qui haeredem facit:* that ſick man does ill for himſelf, who makes his phyſician his heir.

32. Multos *timere debet, quem multi timent:* he of whom many are afraid, ought himſelf to fear many.

33. Nulla *tam bona eſt fortuna, de qua nil poſſis queri:* there's no fortune ſo good, but it bates an ace.

34. Pars *beneficii eſt, quod petitur, ſi bene neges:* 'tis part of the gift, if you deny genteely what is aſked of you.

35. Timidus *vocat ſe cautum, parcum ſordidus:* the coward calls himſelf a wary man; and the miſer ſays, he is frugal.

36. *O vita! miſero longa, felici brevis:* O life! an age to him that is in miſery; and to him that is happy, a moment.

## *A collection of ſentences out of ſome of the writings of the lord* Bacon.

1. IT is a ſtrange deſire which men have, to ſeek power and loſe liberty.

2. Children increaſe the cares of life; but they mitigate the remembrance of death.

3. Round dealing is the honour of man's nature; and a mixture of falſhood is like allay in gold and ſilver, which may make the metal work the better, but it embaſeth it.

4. Death opened the gate to good fame, and extinguiſheth envy.

5. Schism, in the ſpiritual body of the church, is a greater ſcandal than a corruption in manners: as, in the natural body, a wound or ſolution of continuity, is worſe than a corrupt humour.

6. Revenge is a kind of wild juſtice, which the more a man's nature runs to, the more ought law to weed it out.

7. He that ſtudieth revenge, keepeth his own wounds green.

8. Revengeful perſons live and die like witches: Their life is miſchievous, and their end is unfortunate.

9. It was an high ſpeech of *Seneca*, (after the manner of the Stoicks,) that the good things which belong to proſperity, are to be wiſh'd; but the good things which belong to adverſity, are to be admired.

10. He that cannot ſee well, let him go ſoftly.

11. If a man be thought ſecret, it inviteth diſcovery; as the more cloſe air ſucketh in the more open.

12. Keep your authority wholly from your children, not ſo your purſe.

13. Men of noble birth are noted to be envious towards new men when they riſe. For the diſtance is alter'd; and it is like a deceit of the eye, that when others come on, they think themſelves go back.

14. That envy is moſt malignant which is like *Cain*'s, who envied his brother, becauſe his ſacrifice was better accepted, when there was no body but God to look on.

15. The lovers of great place are impatient of privateneſs, even in age, which requires the ſhadow: like old townſmen that will be ſtill ſitting at their ſtreet-door, though there they offer age to ſcorn.

16. In evil, the beſt condition is, not to will; the next, not to can.

17. In great place, aſk counſel of both times: of the ancient time, what is beſt; and of the latter time, what is fitteſt.

18. As in nature things move more violently to their place, and calmly in their place: So virtue in ambition is violent; in authority, ſettled and calm.

19. Boldness in civil buſineſs, is like pronunciation in the orator of *Demoſthenes*; the firſt, ſecond, and third thing.

20. Boldness is blind: wherefore 'tis ill in counſel, but good in execution. For in counſel it is good to ſee dangers, in execution not to ſee them, except they be very great.

21. Without good-nature, man is but a better kind of vermin.

22. God never wrought miracle to convince atheiſm, becauſe his ordinary works convince it.

23. The great atheiſts indeed are hypocrites, who are always handling holy things, but without feeling; ſo as they muſt needs be cauterized in the end.

24. The maſter of ſuperſtition is the people. And in all ſuperſtition, wiſe men follow fools.

25. In removing ſuperſtitions, care would be had, that (as it fareth in ill purgings,) the good be not taken away with the bad; which commonly is done, when the people is the phyſician.

26. He

26. He that goeth into a country before he hath ſome entrance into the language, goeth to ſchool, and not to travel.

27. It is a miſerable ſtate of mind (and yet it is commonly the caſe of kings) to have few things to deſire, and many things to fear.

28. Depression of the nobility may make a king more abſolute, but leſs ſafe.

29. All precepts concerning kings, are, in effect, comprehended in theſe remembrances; remember thou art a man; remember thou art God's vicegerent: The one bridleth their power, and the other their will.

30. Things will have their firſt or ſecond agitation: If they be not toſſed upon the arguments of counſel, they will be toſſed upon the waves of fortune.

31. The true compoſition of a counſellor, is rather to be ſkill'd in his maſter's buſineſs than his nature; for then he is like to adviſe him, and not to feed his humour.

32. Private opinion is more free, but opinion before others is more reverend.

33. Fortune is like a market, where many times if you ſtay a little the price will fall.

34. Fortune ſometimes turneth the handle of the bottle, which is eaſy to be taken hold of; and after the belly, which is hard to graſp.

35. Generally it is good to commit the beginning of all great actions to *Argus* with an hundred eyes; and the ends of them to *Briareus* with an hundred hands; firſt to watch, and then to ſpeed.

36. There is great difference betwixt a cunning man and a wiſe man. There be that can pack the cards, who yet can't play well; they are good in canvaſſes and factions, and yet otherwiſe mean men.

37. Extreme ſelf-lovers will ſet a man's houſe on fire, tho' it were but to roaſt their eggs.

38. New things, like ſtrangers, are more admired, and leſs favour'd.

39. It were good that men, in their innovations, would follow the example of time it ſelf, which indeed innovateth greatly, but quietly, and by degrees ſcarce to be perceived.

40. They that reverence too much old time, are but a ſcorn to the new.

41. The *Spaniards* and *Spartans* have been noted to be of ſmall diſpatch. *Mi venga la muerte de Spagna*; let my death come from *Spain*, for then it will be ſure to be long a coming.

42. You had better take for buſineſs a man ſomewhat abſurd, than overformal.

43. Thoſe who want friends to whom to open their griefs, are cannibals of their own hearts.

44. Number it ſelf importeth not much in armies, where the people are of weak courage: For (as *Virgil* ſays) it never troubles a wolf how many the ſheep be.

45. Let ſtates, that aim at greatneſs, take heed how their nobility and gentry multiply too faſt. In coppice woods, if you leave your ſtaddles too thick, you ſhall never have clean underwood, but ſhrubs and buſhes.

46. A civil war is like the heat of a fever; but a foreign war is like the heat of exerciſe, and ſerveth to keep the body in health.

47. SUSPICIONS among thoughts, are like bats among birds, they ever fly by twilight.

48. BASE natures, if they find themſelves once ſuſpected, will never be true.

49. MEN ought to find the difference between ſaltneſs and bitterneſs. Certainly he that hath a ſatyrical vein, as he maketh others afraid of his wit, ſo he had need be afraid of others memory.

50. DISCRETION in ſpeech is more than eloquence.

51. MEN ſeem neither well to underſtand their riches, nor their ſtrength: of the former they believe greater things than they ſhould, and of the latter much leſs. And from hence certain fatal pillars have bounded the progreſs of learning.

52. RICHES are the baggage of virtue; they cannot be ſpared, nor left behind, but they hinder the march.

53. GREAT riches have ſold more men than ever they have bought out.

54. RICHES have wings, and ſometimes they fly away of themſelves, and ſometimes they muſt be ſet flying to bring in more.

55. HE that defers his charity 'till he is dead, is (if a man weighs it rightly) rather liberal of another man's, than of his own.

56. AMBITION is like choler, if it can move, it makes men active; if it be ſtopp'd, it becomes aduſt, and makes men melancholy.

57. To take a ſoldier without ambition, is to pull off his ſpurs.

58. SOME ambitious men ſeem as ſcreens to princes in matters of danger and envy. For no man will take ſuch parts, except he be like the ſeeld dove, that mounts and mounts, becauſe he cannot ſee about him.

59. PRINCES and ſtates ſhould chuſe ſuch miniſters as are more ſenſible of duty than riſing; and ſhould diſcern a buſy nature from a willing mind.

60. A man's nature runs either to herbs or weeds; therefore let him ſeaſonably water the one, and deſtroy the other.

61. IF a man look ſharply and attentively, he ſhall ſee fortune; for tho' ſhe be blind, ſhe is not inviſible.

62. USURY bringeth the treaſure of a realm or ſtate into few hands: for the uſurer being at certainties, and others at uncertainties; at the end of the game, moſt of the money will be in the box.

63. BEAUTY is beſt in a body that hath rather dignity of preſence, than beauty of aſpect. The beautiful prove accompliſh'd, but not of great ſpirit; and ſtudy, for the moſt part, rather behaviour than virtue.

64. THE beſt part of beauty, is that which a picture cannot expreſs.

65. HE who builds a fair houſe upon an ill ſeat, commits himſelf to priſon.

66. IF you will work on any man, you muſt either know his nature and faſhions, and ſo lead him; or his ends, and ſo perſuade him; or his weakneſſes and diſadvantages, and ſo awe him; or thoſe that have intereſt in him, and ſo govern him.

67. COSTLY followers (among whom we may reckon thoſe who are importunate in ſuits) are not to be liked; leſt while a man maketh his train longer, he maketh his wings ſhorter.

68. FAME is like a river that beareth up things light and ſwollen, and drowns things weighty and ſolid.



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69. SENECA ſaith well, that anger is like rain, which breaks it ſelf upon that it falls.

70. EXCUSATIONS, ceſſions, modeſty it ſelf well govern'd, are but arts of oſtentation.

71. HIGH treaſon is not written in ice; that when the body relenteth, the impreſſion ſhould go away.

72. THE beſt governments are always ſubject to be like the faireſt cryſtals, wherein every iſicle or grain is ſeen, which in a fouler ſtone is never perceived.

73. HOLLOW church papiſts are like the roots of nettles, which themſelves ſting not; but yet they bear all the ſtinging leaves.

ESSAYS

# ESSAYS

OR

# COUNSELS,

## CIVIL and MORAL.

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### To Mr. *Anthony Bacon* his dear Brother.

LOVING and beloved brother, I do now like ſome that have an orchard ill neighboured, that gather their fruit before it is ripe, to prevent ſtealing. Theſe fragments of my conceits were going to print; to labour the ſtay of them had been troubleſome, and ſubject to interpretation; to let them paſs had been to adventure the wrong they might receive by untrue copies, or by ſome garniſhment which it might pleaſe any that ſhould ſet them forth to beſtow upon them. Therefore I held it beſt diſcretion to publiſh them my ſelf, as they paſſed long ago from my pen, without any further diſgrace than the weakneſs of the author. And as I did ever hold, there might be as great a vanity in retiring and withdrawing mens conceits (except they be of ſome nature) from the world, as in obtruding them; ſo in theſe particulars I have played my ſelf the inquiſitor, and find nothing to my underſtanding in them contrary or infectious to the ſtate of religion, or manners, but rather (as I ſuppoſe) medicinable. Only I diſliked now to put them out, becauſe they will be like the late new halfpence, which though the ſilver were good, yet the pieces were ſmall. But ſince they would not ſtay with their maſter, but would needs travel abroad, I have preferred them to you that are next my ſelf; dedicating them, ſuch as they are, to our love, in the depth whereof (I aſſure you) I ſometimes wiſh your infirmities tranſlated upon my ſelf, that her majeſty might have the ſervice of ſo active and able a mind; and I might be with excuſe confined to theſe contemplations and ſtudies, for which I am fitteſt: ſo commend I you to the preſervation of the divine Majeſty.

*From my chamber at* Grays-Inn,
*this* 30*th of* January 1597.

*Your entire loving brother,*

FRAN. BACON.

## To my loving brother ſir *John Conſtable* Kt.

MY laſt eſſays I dedicated to my dear brother, Mr. *Anthony Bacon*, who is with god. Looking amongſt my papers this vacation, I found others of the ſame nature: which if I my ſelf ſhall not ſuffer to be loſt, it ſeemeth the world will not, by the often printing of the former. Miſſing my brother, I found you next; in reſpect of bond both of near alliance, and of ſtraight friendſhip and ſociety, and particularly of communication in ſtudies: wherein I muſt acknowledge my ſelf beholden to you. For as my buſineſs found reſt in my contemplations, ſo my contemplations ever found reſt in your loving conference and judgment. So wiſhing you all good, I remain,

*Your loving brother and Friend,*

1612.

FRA. BACON.

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TO THE

## Right honourable, my very good lord, the duke of *Buckingham*, his grace, lord high admiral of *England*.

EXCELLENT LORD,

SOLOMON ſays, *a good name is as a precious ointment*; and I aſſure my ſelf ſuch will your grace's name be with poſterity. For your fortune and merit both have been eminent: And you have planted things that are like to laſt. I do now publiſh my eſſays; which, of all my other works have been moſt current: for that, as it ſeems, they come home to mens buſineſs and boſoms. I have enlarged them both in number and weight; ſo that they are indeed a new work. I thought it therefore agreeable to my affection and obligation to your grace, to prefix your name before them both in *Engliſh* and in *Latin:* For I do conceive, that the *Latin* volume of them, (being in the univerſal language) may laſt as long as books laſt. My Inſtauration I dedicated to the king: my hiſtory of *Henry* the ſeventh, (which I have now alſo tranſlated into *Latin*) and my portions of Natural Hiſtory, to the prince: and theſe I dedicate to your grace; being of the beſt fruits, that by the good increaſe which God gives to my pen and labours, I could yield. God lead your grace by the hand.

*Your grace's moſt obliged and faithful Servant,*

FR. ST. ALBAN.

# ESSAYS

## CIVIL and MORAL.

### I. *Of truth.*

WHAT is truth? ſaid jeſting *Pilate*; and would not ſtay for an anſwer. Certainly there be that delight in giddineſs; and count it a bondage to fix a belief; affecting free-will in thinking, as well as in acting. And though the ſects of philoſophers of that kind be gone, yet there remain certain diſcourſing wits, which are of the ſame veins, though there be not ſo much blood in them, as was in thoſe of the ancients. But it is not only the difficulty and labour which men take in finding out of truth; nor again, that when it is found, it impoſeth upon mens thoughts; that doth bring lyes in favour: but a natural, though corrupt love of the lye it ſelf. One of the later ſchool of the *Graecians* examineth the matter, and is at a ſtand to think what ſhould be in it, that men ſhould love lyes; where neither they make for pleaſure, as with poets; nor for advantage, as with the merchant; but for the lye's ſake. But I cannot tell: this ſame truth is a naked and open day-light, that doth not ſhew the maſques, and mummeries, and triumphs of the world, half ſo ſtately and daintily, as candle-lights. Truth may perhaps come to the price of a pearl, that ſheweth beſt by day: but it will not riſe to the price of a diamond or carbuncle, that ſheweth beſt in varied lights. A mixture of a lye doth ever add pleaſure. Doth any man doubt, that if there were taken out of mens minds, vain opinions, flattering hopes, falſe valuations, imaginations as one would, and the like; but it would leave the minds of a number of men, poor ſhrunken things; full of melancholy and indiſpoſition, and unpleaſing to themſelves? One of the fathers in great ſeverity, called poeſy, *vinum daemonum*; becauſe it filleth the imagination, and yet it is but with the ſhadow of a lye. But it is not the lye that paſſeth through the mind, but the lye that ſinketh in, and ſettleth in it, that doth the hurt, ſuch as we ſpake of before. But howſoever theſe things are thus in mens depraved judgments and affections, yet truth, which only doth judge it ſelf, teacheth, that the enquiry of truth, which is the love-making, or wooing of it; the knowledge of truth, which is the preſence of it; and the belief of truth, which is the enjoying of it; is the ſovereign good of humane nature. The firſt creature of God, in the works of the days, was the light of the ſenſe; the laſt was the light of reaſon; and his ſabbath work ever ſince, is the illumination of his Spirit. Firſt he breathed light upon the face of the matter, or *chaos*; then he breathed light into the face of man; and ſtill he breatheth and inſpireth light into the face of his choſen. The poet that beautified the ſect, that was otherwiſe inferiour to the reſt, ſaith yet excellently well: it is a pleaſure to ſtand upon the ſhore, and to ſee ſhips toſt upon the ſea: a pleaſure to ſtand in the window of a caſtle, and to ſee

a battle, and the adventures thereof below: but no pleaſure is comparable to the ſtanding upon the vantage ground of truth: (a hill not to be commanded, and where the air is always clear and ſerene;) and to ſee the errors, and wandrings, and miſts, and tempeſts, in the vale below: ſo always that this proſpect be with pity, and not with ſwelling or pride. Certainly, it is heaven upon earth, to have a man's mind move in charity, reſt in providence, and turn upon the poles of truth.

To paſs from theological and philoſophical truth, to the truth of civil buſineſs; it will be acknowledged, even by thoſe that practiſe it not, that clear and round dealing is the honour of man's nature; and that mixture of falſhood, is like allay in coin of gold and ſilver; which may make the metal work the better, but it embaſeth it. For theſe winding and crooked courſes are the goings of the ſerpent; which goeth baſely upon the belly, and not upon the feet. There is no vice that doth ſo cover a man with ſhame, as to be found falſe and perfidious. And therefore *Montaigne* ſaith prettily, when he enquired the reaſon, why the word of the lye ſhould be ſuch a diſgrace, and ſuch an odious charge? Saith he, if it be well weighed, to ſay that a man lyeth, is as much as to ſay, that he is brave towards God, and a coward towards men. For a lye faces God, and ſhrinks from man. Surely the wickedneſs of falſhood, and breach of faith, cannot poſſibly be ſo highly expreſſed, as in that it ſhall be the laſt peal, to call the judgments of God upon the generations of men: It being foretold, that when *Chriſt cometh*, he ſhall not *find faith upon earth.*

## II. *Of death.*

Men fear death, as children fear to go in the dark: and as that natural fear in children is increaſed with tales, ſo is the other. Certainly, the contemplation of death, as the wages of ſin, and paſſage to another world, is holy and religious; but the fear of it, as a tribute due unto nature, is weak. Yet in religious meditations, there is ſometimes mixture of vanity, and of ſuperſtition. You ſhall read in ſome of the friars books of mortification, that a man ſhould think with himſelf, what the pain is, if he have but his finger's end preſſed, or tortured; and thereby imagine what the pains of death are, when the whole body is corrupted and diſſolved; when many times death paſſeth with leſs pain, than the torture of a limb: for the moſt vital parts are not the quickeſt of ſenſe. And by him that ſpake only as a philoſopher, and natural man, it was well ſaid; *pompa mortis magis terret, quam mors ipſa.* Groans, and convulſions, and a diſcoloured face, and friends weeping, and blacks, and obſequies, and the like, ſhew death terrible. It is worthy the obſerving, that there is no paſſion in the mind of man ſo weak, but it mates and maſters the fear of death: and therefore death is no ſuch terrible enemy, when a man hath ſo many attendants about him, that can win the combat of him. Revenge triumphs over death; love ſlights it; honour aſpireth to it; grief flieth to it; fear pre-occupateth it; nay, we read, after *Otho* the emperor had ſlain himſelf, pity (which is the tendereſt of affections) provoked many to die, out of mere compaſſion to their ſovereign, and as the trueſt ſort of followers. Nay, *Seneca* adds, niceneſs and ſatiety; *cogita quamdiu eadem feceris; mori velle, non tantum fortis, aut miſer, ſed etiam faſtidioſus poteſt.* A man would die, though he were neither valiant nor miſerable, only upon a wearineſs to do the ſame thing ſo oft over and over. It is no leſs worthy to obſerve, how little alteration in good ſpirits, the approaches of death make; for they appear to be the

ſame

ſame men till the laſt inſtant. *Auguſtus Caeſar* died in a complement; *Livia, conjugii noſtri memor, vive & vale. Tiberius* in diſſimulation; as *Tacitus* ſaith of him; *jam Tiberium vires & corpus, non diſſimulatio, deſerebant. Veſpaſian* in a jeſt; ſitting upon the ſtool; *ut puto Deus fio. Galba* with a ſentence; *feri, ſi ex re ſit populi Romani*; holding forth his neck. *Septimius Severus* in diſpatch; *adeſte, ſi quid mihi reſtat agendum*; and the like. Certainly the Stoicks beſtowed too much coſt upon death, and by their great preparations made it appear more fearful. Better, ſaith he, *qui finem vitae extremum inter munera ponat naturae.* It is as natural to die, as to be born; and to a little infant, perhaps, the one is as painful as the other. He that dies in an earneſt purſuit, is like one that is wounded in hot blood; who, for the time, ſcarce feels the hurt; and therefore a mind fixt and bent upon ſomewhat that is good, doth avert the dolours of death: but above all, believe it, the ſweeteſt canticle is, *nunc dimittis*; when a man hath obtained worthy ends and expectations. Death hath this alſo; that it openeth the gate to good fame, and extinguiſheth envy, *—Extinctus amabitur idem.*

## III. *Of unity in religion.*

Religion being the chief band of humane ſociety, it is a happy thing, when it ſelf is well contained within the true band of unity. The quarrels and diviſions about religion were evils unknown to the heathen. The reaſon was, becauſe the religion of the heathen conſiſted rather in rites and ceremonies, than in any conſtant belief. For you may imagine what kind of faith theirs was, when the chief doctors and fathers of their church were the poets. But the true God hath this attribute, that he is a jealous God; and therefore his worſhip and religion will endure no mixture, nor partner. We ſhall therefore ſpeak a few words concerning the unity of the church; what are the fruits thereof; what the bounds; and what the means.

The fruits of unity (next unto the well-pleaſing of God, which is all in all) are two; the one towards thoſe that are without the church; the other towards thoſe that are within. For the former; it is certain, that hereſies and ſchiſms are of all others the greateſt ſcandals; yea more than corruption of manners. For as in the natural body, a wound or ſolution of continuity, is worſe than a corrupt humour; ſo in the ſpiritual. So that nothing doth ſo much keep men out of the church, and drive men out of the church, as breach of unity: and therefore, whenſoever it cometh to that paſs, that one ſaith, *ecce in deſerto*; another ſaith, *ecce in penetralibus*; that is, when ſome men ſeek Chriſt in the conventicles of hereticks, and others in an outward face of a church, that voice had need continually to ſound in mens ears, *nolite exire*, go not out. The doctor of the Gentiles (the propriety of whoſe vocation drew him to have a ſpecial care of thoſe without) ſaith; *if an heathen come in, and hear you ſpeak with ſeveral tongues, will he not ſay that you are mad?* And certainly, it is little better; when atheiſts, and prophane perſons, do hear of ſo many diſcordant and contrary opinions in religion; it doth avert them from the church, and maketh them *to ſit down in the chair of the ſcorners.* It is but a light thing to be vouched in ſo ſerious a matter, but yet it expreſſeth well the deformity. There is a maſter of ſcoffing; that in his catalogue of books of a feigned library, ſets down this title of a book; the Morris-dance of Hereticks. For indeed every ſect of them hath a diverſe poſture or cringe by them-

themſelves, which cannot but move deriſion in worldlings and depraved politicks, who are apt to contemn holy things.

As for the fruit towards thoſe that are within, it is peace; which containeth infinite bleſſings: it eſtabliſheth faith; it kindleth charity; the outward peace of the church diſtilleth into peace of conſcience; and it turneth the labours of writing and reading of controverſies, into treaties of mortification and devotion.

Concerning the bonds of unity; the true placing of them importeth exceedingly. There appear to be two extremes. For to certain zealots all ſpeech of pacification is odious. *Is it peace, Jehu? What haſt thou to do with peace? turn thee behind me.* Peace is not the matter, but following and party. Contrariwiſe, certain *Laodiceans*, and lukewarm perſons, think they may accommodate points of religion by middle-ways, and taking part of both, and witty reconcilements; as if they would make an arbitrement between God and man. Both theſe extremes are to be avoided; which will be done, if the league of Chriſtians, penned by our Saviour himſelf, were in the two croſs clauſes thereof, ſoundly and plainly expounded: *he that is not with us is againſt us:* and again; *he that is not againſt us is with us:* that is, if the points fundamental, and of ſubſtance in religion, were truly diſcerned and diſtinguiſhed, from points not merely of faith, but of opinion, order, or good intention. This is a thing may ſeem to many, a matter trivial, and done already; but if it were done leſs partially, it would be embraced more generally.

Of this I may give only this advice, according to my ſmall model. Men ought to take heed of rending God's church by two kinds of controverſies. The one is, when the matter of the point controverted is too ſmall and light, not worth the heat and ſtrife about it, kindled only by contradiction. For, as it is noted by one of the fathers, Chriſt's coat indeed had no ſeam; but the church's veſture was of divers colours: whereupon he ſaith, *in veſte varietas ſit, ſciſſura non ſit*; they be two things, unity and uniformity. The other is, when the matter of the point controverted is great; but it is driven to an over-great ſubtilty and obſcurity; ſo that it becometh a thing rather ingenious than ſubſtantial. A man that is of judgment and underſtanding, ſhall ſometimes hear ignorant men differ, and know well within himſelf, that thoſe which ſo differ mean one thing, and yet they themſelves would never agree. And if it come ſo to paſs in that diſtance of judgment which is between man and man; ſhall we not think that God above, that knows the heart, doth not diſcern that frail men, in ſome of their contradictions, intend the ſame thing, and accepteth of both? The nature of ſuch controverſies is excellently expreſſed by St. *Paul*, in the warning and precept that he giveth concerning the ſame, *devita profanas vocum novitates, & oppoſitiones falſi nominis ſcientiae.* Men create oppoſitions which are not; and put them into new terms ſo fixed, as whereas the meaning ought to govern the term, the term in effect governeth the meaning. There be alſo two falſe peaces, or unities; the one when the peace is grounded but upon an implicit ignorance; for all colours will agree in the dark: the other, when it is pieced up upon a direct admiſſion of contraries in fundamental points. For truth and falſhood, in ſuch things, are like the iron and clay in the toes of *Nebuchadnezzar*'s image; they may cleave, but they will not incorporate.

Concerning the means of procuring unity; men muſt beware, that in the procuring or muniting of religious unity, they do not diſſolve and deface the laws

laws of charity, and of humane ſociety. There be two ſwords amongſt Chriſtians, the ſpiritual and temporal; and both have their due office and place in the maintenance of religion. But we may not take up the third ſword, which is *Mahomet*'s ſword, or like unto it; that is, to propagate religion by wars, or by ſanguinary perſecutions, to force conſciences; except it be in caſes of overt ſcandal, blaſphemy, or intermixture of practice againſt the ſtate; much leſs to nouriſh ſeditions; to authorize conſpiracies and rebellions; to put the ſword into the peoples hands, and the like, tending to the ſubverſion of all government, which is the ordinance of God. For this is but to daſh the firſt table againſt the ſecond; and ſo to conſider men as Chriſtians, as we forget that they are men. *Lucretius* the poet, when he beheld the act of *Agamemnon*, that could endure the ſacrificing of his own daughter, exclaimed;

*Tantum relligio potuit ſuadere malorum.*

What would he have ſaid, if he had known of the maſſacre in *France*, or the powder-treaſon of *England?* He would have been ſeven times more epicure and atheiſt than he was: for as the temporal ſword is to be drawn with great circumſpection, in caſes of religion; ſo it is a thing monſtrous to put it into the hands of the common people. Let that be left unto the anabaptiſts, and other furies. It was great blaſphemy, when the devil ſaid, *I will aſcend and be like the Higheſt*; but it is greater blaſphemy to perſonate God, and bring him in ſaying; I will deſcend, and be like the prince of darkneſs. And what is it better to make the cauſe of religion to deſcend to the cruel and execraable actions of murthering princes, butchery of people, and ſubverſion of ſtates, and governments? Surely, this is to bring down the Holy Ghoſt, inſtead of the likeneſs of a dove, in the ſhape of a vulture or raven: and to ſet, out of the bark of a Chriſtian church, a flag of a bark of pirates and aſſaſſins. Therefore it is moſt neceſſary, that the church by doctrine and decree; princes by their ſword; and all learnings, both chriſtian and moral, as by their mercury rod; do damn and ſend to hell, for ever thoſe facts and opinions, tending to the ſupport of the ſame, as hath been already in good part done. Surely in counſels, concerning religion, that counſel of the Apoſtle would be prefixed; *Ira hominis non implet juſtitiam Dei.* And it was a notable obſervation of a wiſe father, and no leſs ingenuouſly confeſſed; that thoſe which held and perſuaded preſſure of conſciences, were commonly intereſted therein themſelves, for their own ends.

## IV. *Of revenge.*

Revenge is a kind of wild juſtice, which the more man's nature runs to, the more ought law to weed it out. For as for the firſt wrong, it doth but offend the law; but the revenge of that wrong, putteth the law out of office. Certainly in taking revenge, a man is but even with his enemy; but in paſſing it over, he is ſuperior: for it is a prince's part to pardon. And *Solomon*, I am ſure, ſaith, *it is the glory of a man to paſs by an offence.* That which is paſt is gone and irrevocable, and wiſe men have enough to do with things preſent and to come: therefore they do but trifle with themſelves, that labour in paſt matters. There is no man doth a wrong for the wrong's ſake; but thereby to purchaſe himſelf profit, or pleaſure, or honour, or the like. Therefore why ſhould I be angry with a man for loving himſelf better than me? And if any man ſhould do wrong, mere-

ly out of ill nature, why? Yet it is but like the thorn, or bryar, which prick and ſcratch, becauſe they can do no other. The moſt tolerable ſort of revenge, is for thoſe wrongs which there is no law to remedy: but then let a man take heed the revenge be ſuch, as there is no law to puniſh; elſe a man's enemy is ſtill before-hand, and it is two for one. Some, when they take revenge, are deſirous the party ſhould know when it cometh: this is the more generous. For the delight ſeemeth to be not ſo much in doing the hurt, as in making the party repent: but baſe and crafty cowards are like the arrow that flieth in the dark. *Coſimus* duke of *Florence*, had a deſperate ſaying againſt perfidious or neglecting friends, as if thoſe wrongs were unpardonable. You ſhall read (ſaith he) that we are commanded to forgive our enemies; but you never read, that we are commanded to forgive our friends. But yet the ſpirit of *Job* was in a better tune; ſhall we (ſaith he) take good at God's hands, and not be content to take evil alſo? And ſo of friends in a proportion. This is certain, that a man that ſtudieth revenge, keeps his own wounds green, which otherwiſe would heal, and do well. Publick revenges are for the moſt part fortunate; as that for the death of *Caeſar*; for the death of *Pertinax*; for the death of *Henry* the third of *France*; and many more: but in private revenges it is not ſo; nay rather, vindicative perſons live the life of witches; who as they are miſchievous, ſo end they unfortunate.

## V. *Of adverſity.*

It was an high ſpeech of *Seneca*, (after the manner of the Stoicks) that the good things which belong to proſperity are to be wiſhed, but the good things that belong to adverſity are to be admired: *Bona rerum ſecundarum optabilia, adverſarum mirabilia.* Certainly if miracles be the command over nature, they appear moſt in adverſity. It is yet a higher ſpeech of his than the other, (much too high for a heathen,) it is true greatneſs, to have in one the frailty of a man, and the ſecurity of a God: *Vere magnum habere fragilitatem hominis, ſecuritatem Dei.* This would have done better in poeſy, where tranſcendencies are more allowed. And the poets indeed have been buſy with it; for it is in effect the thing which is figured in that ſtrange fiction of the ancient poets, which ſeemeth not to be without myſtery; nay, and to have ſome approach to the ſtate of a Chriſtian: That *Hercules*, when he went to unbind *Prometheus* (by whom humane nature is repreſented) ſailed the length of the great ocean in an earthen pot or pitcher; lively deſcribing Chriſtian reſolution, that ſaileth in the frail barque of the fleſh through the waves of the world. But to ſpeak in a mean: The virtue of proſperity, is temperance; the virtue of adverſity, is fortitude; which in morals is the more heroical virtue. Proſperity is the bleſſing of the Old Teſtament; adverſity is the bleſſing of the New, which carrieth the greater benediction, and the clearer revelation of God's favour. Yet, even in the Old Teſtament, if you liſten to *David*'s harp, you ſhall hear as many herſe-like airs as carols: and the pencil of the Holy Ghoſt hath labour'd more in deſcribing the afflictions of *Job*, than the felicities of *Solomon*. Proſperity is not without many fears and diſtaſtes; and adverſity is not without comforts and hopes. We ſee in needle-works and embroideries, it is more pleaſing to have a lively work upon a ſad and ſolemn ground, than to have a dark and melancholy work upon a lightſome ground: judge therefore of the pleaſure of the heart by the pleaſure of the eye. Certainly virtue is like

precious

precious odours, moſt fragrant when they are incenſed, or cruſhed; for proſperity doth beſt diſcover vice, but adverſity doth beſt diſcover virtue.

## VI. *Of ſimulation and diſſimulation.*

DISSIMULATION is but a faint kind of policy, or wiſdom; for it aſketh a ſtrong wit, and a ſtrong heart, to know when to tell truth, and to do it. Therefore it is the weaker ſort of politicians that are the great diſſemblers.

TACITUS ſaith, *Livia* ſorted well with the arts of her huſband, and diſſimulation of her ſon; attributing arts or policy to *Auguſtus*, and diſſimulation to *Tiberius*. And again, when *Mucianus* encourageth *Veſpaſian* to take arms againſt *Vitellius*, he ſaith; we riſe not againſt the piercing judgment of *Auguſtus*, nor the extreme caution or cloſeneſs of *Tiberius*: theſe properties of arts or policy, and diſſimulation or cloſeneſs, are indeed habits and faculties ſeveral, and to be diſtinguiſhed. For if a man have that penetration of judgment as he can diſcern what things are to be laid open, and what to be ſecreted, and what to be ſhewed at half lights, and to whom and when, (which indeed are arts of ſtate, and arts of life, as *Tacitus* well calleth them) to him, a habit of diſſimulation, is a hinderance and a poorneſs. But if a man cannot obtain to that judgment, then it is left to him, generally, to be cloſe and a diſſembler. For where a man cannot chuſe, or vary in particulars, there it is good to take the ſafeſt and warieſt way in general; like the going ſoftly by one that cannot well ſee. Certainly the ableſt men that ever were, have had all an openneſs and frankneſs of dealing, and a name of certainty and veracity; but then they were like horſes well managed; for they could tell paſſing well, when to ſtop or turn: and at ſuch times, when they thought the caſe indeed required diſſimulation, if then they uſed it, it came to paſs, that the former opinion ſpread abroad of their good faith and clearneſs of dealing, made them almoſt inviſible.

THERE be three degrees of this hiding and veiling of a man's ſelf. The firſt cloſeneſs, reſervation and ſecrecy, when a man leaveth himſelf without obſervation, or without hold to be taken, what he is. The ſecond diſſimulation in the negative, when a man lets fall ſigns and arguments, that he is not that he is. And the third ſimulation in the affirmative, when a man induſtriouſly and expreſsly feigns and pretends to be that he is not.

FOR the firſt of theſe, ſecrecy: it is indeed the virtue of a confeſſor; and aſſuredly the ſecret man heareth many confeſſions; for who will open himſelf to a blab or a babbler; but if a man be thought ſecret, it inviteth diſcovery; as the more cloſe air ſucketh in the more open: and as in confeſſion the revealing is not for worldly uſe, but for the eaſe of a man's heart; ſo ſecret men come to the knowledge of many things in that kind; while men rather diſcharge their minds, than impart their minds. In few words, myſteries are due to ſecrecy. Beſides, (to ſay truth) nakedneſs is uncomely, as well in mind as in body; and it addeth no ſmall reverence to mens manners and actions, if they be not altogether open. As for talkers and futile perſons, they are commonly vain and credulous withal. For he that talketh what he knoweth, will alſo talk what he knoweth not. Therefore ſet it down, that an habit of ſecrecy is both politick and moral. And in this part it is good, that a man's face give his tongue leave to ſpeak. For the diſcovery of a man's ſelf, by the tracts of his countenance, is a great weakneſs and betraying; by how much, it is many times more marked and believed than a man's words.

For the ſecond, which is diſſimulation; it followeth many times upon ſecrecy, by a neceſſity: ſo that he that will be ſecret muſt be a diſſembler in ſome degree. For men are too cunning to ſuffer a man to keep an indifferent carriage between both, and to be ſecret, without ſwaying the balance on either ſide. They will ſo beſet a man with queſtions, and draw him on, and pick it out of him, that without an abſurd ſilence, he muſt ſhew an inclination one way; or if he do not, they will gather as much by his ſilence, as by his ſpeech. As for equivocations, or oraculous ſpeeches, they cannot hold out long. So that no man can be ſecret, except he give himſelf a little ſcope of diſſimulation; which is as it were but the ſkirts or train of ſecrecy.

But for the third degree, which is ſimulation and falſe profeſſion; that I hold more culpable and leſs politick, except it be in great and rare matters. And therefore a general cuſtom of ſimulation, (which is this laſt degree) is a vice riſing either of a natural falſeneſs, or fearfulneſs; or of a mind that hath ſome main faults; which becauſe a man muſt needs diſguiſe, it maketh him practiſe ſimulation in other things, leſt his hand ſhould be out of ure.

The great advantages of ſimulation and diſſimulation are three. Firſt to lay aſleep oppoſition, and to ſurprize. For where a man's intentions are publiſhed, it is an alarm to call up all that are againſt them. The ſecond is, to reſerve to a man's ſelf a fair retreat: for if a man engage himſelf by a manifeſt declaration, he muſt go through, or take a fall. The third is, the better to diſcover the mind of another. For to him that opens himſelf, men will hardly ſhew themſelves adverſe; but will (fair) let him go on, and turn their freedom of ſpeech, to freedom of thought. And therefore it is a good ſhrewd proverb of the *Spaniard*, tell a lye and find a troth. As if there were no way of diſcovery but by ſimulation. There be alſo three diſadvantages to ſet it even. The firſt, that ſimulation and diſſimulation commonly carry with them a ſhew of fearfulneſs, which in any buſineſs doth ſpoil the feathers of round flying up to the mark. The ſecond, that it puzzleth and perplexeth the conceits of many, that perhaps would otherwiſe co-operate with him; and makes a man walk, almoſt alone, to his own ends. The third and greateſt is, that it depriveth a man of one of the moſt principal inſtruments for action; which is truſt and belief. The beſt compoſition and temperature is, to have openneſs in fame and opinion; ſecrecy in habit; diſſimulation in ſeaſonable uſe; and a power to feign, if there be no remedy.

## VII. *Of parents and children.*

The joys of parents are ſecret; and ſo are their griefs and fears: they cannot utter the one, nor they will not utter the other. Children ſweeten labours; but they make misfortunes more bitter: they increaſe the cares of life, but they mitigate the remembrance of death. The perpetuity by generation is common to beaſts; but memory, merit, and noble works, are proper to men: and ſurely a man ſhall ſee the nobleſt works and foundations have proceeded from childleſs men; which have ſought to expreſs the images of their minds, where thoſe of their bodies have failed: ſo the care of poſterity is moſt in them that have no poſterity. They that are the firſt raiſers of their houſes, are moſt indulgent towards their children; beholding them as the continuance, not only of their kind, but of their work; and ſo both children and creatures.

The difference in affection of parents towards their ſeveral children, is many times unequal; and ſometimes unworthy; eſpecially in the mother; as *Solomon* ſaith; *a wiſe ſon rejoiceth the father*; *but an ungracious ſon ſhames the mother.* A man ſhall ſee where there is a houſe full of children, one or two of the eldeſt reſpected, and the youngeſt made wantons; but in the midſt, ſome that are as it were forgotten, who many times nevertheleſs prove the beſt. The illiberality of parents in allowance towards their children, is an harmful error; makes them baſe; acquaints them with ſhifts; makes them ſort with mean company; and makes them ſurfeit more when they come to plenty: and therefore the proof is beſt when men keep their authority towards their children, but not their purſe. Men have a fooliſh manner (both parents, and ſchoolmaſters, and ſervants) in creating and breeding an emulation between brothers during childhood, which many times ſorteth to diſcord when they are men, and diſturbeth families. The *Italians* make little difference between children and nephews, or near kinſfolks; but ſo they be of the lump they care not, though they paſs not through their own body. And, to ſay truth, in nature it is much a like matter; inſomuch that we ſee a nephew ſometimes reſembleth an uncle, or a kinſman, more than his own parent; as the blood happens. Let parents chuſe betimes the vocations and courſes they mean their children ſhould take; for then they are moſt flexible; and let them not too much apply themſelves to the diſpoſition of their children, as thinking they will take beſt to that which they have moſt mind to. It is true, that if the affection or aptneſs of the children be extraordinary, then it is good not to croſs it; but generally the precept is good, *optimum elige, ſuave & facile illud faciet conſuetudo.* Younger brothers are commonly fortunate, but ſeldom or never where the elder are diſinherited.

## VIII. *Of marriage and a ſingle life.*

He that hath wife and children, hath given hoſtages to fortune; for they are impediments to great enterprizes, either of virtue or miſchief. Certainly, the beſt works, and the greateſt merit for the publick, have proceeded from the unmarried, or childleſs men; which both in affection and means have married and endowed the publick. Yet it were great reaſon, that thoſe that have children, ſhould have greateſt care of future times; unto which they know they muſt tranſmit their deareſt pledges. Some there are, who though they lead a ſingle life, yet their thoughts do end with themſelves, and account future times impertinences. Nay, there are ſome other, that account wife and children but as bills of charges. Nay more, there are ſome fooliſh rich covetous men, that take a pride in having no children, becauſe they may be thought ſo much the richer. For perhaps they have heard ſome talk, ſuch a one is a great rich man; and another except to it, yea, but he hath a great charge of children: as if it were an abatement to his riches. But the moſt ordinary cauſe of a ſingle life is liberty; eſpecially in certain ſelf-pleaſing, and humorous minds, which are ſo ſenſible of every reſtraint, as they will go near to think their girdles and garters to be bonds and ſhackles. Unmarried men are beſt friends, beſt maſters, beſt ſervants, but not always beſt ſubjects; for they are light to run away; and almoſt all fugitives are of that condition. A ſingle life doth well with churchmen: for charity will hardly water the ground, where it muſt firſt fill a pool. It is indifferent for judges and magiſtrates: for if they be facile and corrupt, you ſhall have a ſervant five times worſe than a wife.

wife. For ſoldiers, I find the generals commonly in their hortatives, put men in mind of their wives and children. And I think the deſpiſing of marriage amongſt the Turks, maketh the vulgar ſoldiers more baſe. Certainly, wife and children are a kind of diſcipline of humanity: and ſingle men, though they be many times more charitable, becauſe their means are leſs exhauſt; yet on the other ſide, they are more cruel and hard-hearted, (good to make ſevere inquiſitors) becauſe their tenderneſs is not ſo oft called upon. Grave natures, led by cuſtom, and therefore conſtant, are commonly loving huſbands; as was ſaid of *Ulyſſes, vetulam ſuam praetulit immortalitati.* Chaſte women are often proud and froward, as preſuming upon the merit of their chaſtity. It is one of the beſt bonds, both of chaſtity and obedience, in the wife, if ſhe think her huſband wiſe; which ſhe will never do, if ſhe find him jealous. Wives are young mens miſtreſſes; companions for middle age; and old mens nurſes. So as a man may have a quarrel to marry when he will. But yet he was reputed one of the wiſe men, that made anſwer to the queſtion, when a man ſhould marry? A young man not yet, an elder man not at all. It is often ſeen, that bad huſbands have very good wives; whether it be, that it raiſeth the price of their huſbands kindneſs when it comes; or that the wives take a pride in their patience. But this never fails, if the bad huſbands were of their own chuſing, againſt their friends conſent; for then they will be ſure to make good their own folly.

## IX. *Of envy.*

THERE be none of the affections which have been noted to faſcinate or bewitch, but love and envy. They both have vehement wiſhes; they frame themſelves readily into imaginations and ſuggeſtions: and they come eaſily into the eye; eſpecially upon the preſence of the objects; which are the points that conduce to faſcination, if any ſuch thing there be. We ſee likewiſe, the ſcripture calleth envy, an *evil eye:* and the aſtrologers call the evil influences of the ſtars, evil aſpects; ſo that ſtill there ſeemeth to be acknowledged in the act of envy, an ejaculation, or irradiation of the eye. Nay, ſome have been ſo curious, as to note, that the times when the ſtroke or percuſſion of an envious eye doth moſt hurt, are, when the party envied is beheld in glory or triumph; for that ſets an edge upon envy: and beſides, at ſuch times, the ſpirits of the perſon envied do come forth moſt into the outward parts, and ſo meet the blow.

BUT leaving theſe curioſities, (though not unworthy to be thought on in fit place) we will handle, what perſons are apt to envy others; what perſons are moſt ſubject to be envied themſelves; and what is the difference between publick and private envy.

A man that hath no virtue in himſelf, ever envieth virtue in others. For mens minds will feed upon their own good, or upon others evil; and who wanteth the one, will prey upon the other; and whoſo is out of hope to attain to another's virtue, will ſeek to come at even hand, by depreſſing another's fortune.

A man that is buſy and inquiſitive, is commonly envious: for to know much of other mens matters cannot be, becauſe all that ado may concern his own eſtate: therefore it muſt needs be, that he taketh a kind of play-pleaſure in looking upon the fortunes of others; neither can he that mindeth but his own buſineſs, find much matter for envy. For envy is a gadding paſſion,

paſſion, and walketh the ſtreets, and doth not keep home: *Non eſt curioſus, quin idem ſit malevolus.*

MEN of noble birth are noted to be envious towards new men when they riſe; for the diſtance is altered; and it is like a deceipt of the eye, that when others come on, they think themſelves go back.

DEFORMED perſons and eunuchs, and old men and baſtards, are envious: for he that cannot poſſibly mend his own caſe, will do what he can to impair another's; except theſe defects light upon a very brave and heroical nature, which thinketh to make his natural wants part of his honour: in that it ſhould be ſaid, that an eunuch or a lame man did ſuch great matters; affecting the honour of a miracle, as it was in *Narſes* the eunuch, and *Ageſilaus* and *Tamberlane*, that were lame men.

THE ſame is the caſe of men that riſe after calamities and misfortunes; for they are as men fallen out with the times; and think other mens harms a redemption of their own ſufferings.

THEY that deſire to excel in too many matters, out of levity and vain-glory, are ever envious, for they cannot want work; it being impoſſible, but many, in ſome one of thoſe things, ſhould ſurpaſs them. Which was the character of *Adrian* the emperor, that mortally envied poets, and painters, and artificers, in works wherein he had a vein to excel.

LASTLY, near kinsfolks, and fellows in office, and thoſe that have been bred together, are more apt to envy their equals when they are raiſed. For it doth upbraid unto them their own fortunes; and pointeth at them, and cometh oftener into their remembrance, and incurreth likewiſe more into the note of others; and envy ever redoubleth from ſpeech and fame. *Cain*'s envy was the more vile and malignant towards his brother *Abel*, becauſe, when his ſacrifice was better accepted, there was no body to look on. Thus much for thoſe that are apt to envy.

CONCERNING thoſe that are more or leſs ſubject to envy: Firſt, perſons of eminent virtue, when they are advanced, are leſs envied. For their fortune ſeemeth but due unto them; and no man envieth the payment of a debt, but rewards, and liberality rather. Again, envy is ever joined with the comparing of a man's ſelf; and where there is no compariſon, no envy; and therefore kings are not envied, but by kings. Nevertheleſs it is to be noted, that unworthy perſons are moſt envied at their firſt coming in, and afterwards overcome it better; whereas contrariwiſe, perſons of worth and merit are moſt envied, when their fortune continueth long. For by that time, though their virtue be the ſame, yet it hath not the ſame luſtre; for freſh men grow up that darken it.

PERSONS of noble blood are leſs envied in their riſing; for it ſeemeth but right done to their birth: beſides, there ſeemeth not much added to their fortune; and envy is as the ſun-beams, that beat hotter upon a bank or ſteep riſing round, than upon a flat. And for the ſame reaſon, thoſe that are advanced by degrees, are leſs envied than thoſe that are advanced ſuddenly, and *per ſaltum*.

THOSE that have joined with their honour, great travels, cares, or perils, are leſs ſubject to envy: for men think that they earn their honours hardly, and pity them ſometimes; and pity ever healeth envy: wherefore you ſhall obſerve, that the more deep and ſober ſort of politick perſons, in their greatneſs, are ever bemoaning themſelves what a life they lead, chanting a *quanta patimur*: not that they feel it ſo, but only to abate the edge of envy. But this is to be underſtood of buſineſs that is laid upon men, and not

ſuch as they call unto themſelves: for nothing increaſeth envy more, than an unneceſſary and ambitious ingroſſing of buſineſs; and nothing doth extinguiſh envy more, than for a great perſon to preſerve all other inferior officers in their full rights and preheminencies of their places: for by that means there be ſo many ſcreens between him and envy.

Above all, thoſe are moſt ſubject to envy, which carry the greatneſs of their fortunes in an inſolent and proud manner; being never well but while they are ſhewing how great they are, either by outward pomp, or by triumphing over all oppoſition or competition: whereas wiſe men will rather do ſacrifice to envy, in ſuffering themſelves, ſometimes of purpoſe to be croſſed, and overborn in things that do not much concern them. Notwithſtanding ſo much is true; that the carriage of greatneſs, in a plain and open manner, (ſo it be without arrogancy and vain-glory,) doth draw leſs envy, than if it be in a more crafty and cunning faſhion. For in that courſe a man doth but diſavow fortune, and ſeemeth to be conſcious of his own want in worth, and doth but teach others to envy him.

Lastly, to conclude this part; as we ſaid in the beginning, that the act of envy had ſomewhat in it of witchcraft, ſo there is no other cure of envy, but the cure of witchcraft: and that is, to remove the lot (as they call it) and to lay it upon another. For which purpoſe, the wiſer ſort of great perſons bring in ever upon the ſtage, ſomebody upon whom to derive the envy that would come upon themſelves; ſometimes upon miniſters and ſervants; ſometimes upon colleagues and aſſociates, and the like: and for that turn, there are never wanting ſome perſons of violent and undertaking natures, who ſo they may have power and buſineſs, will take it at any coſt.

Now to ſpeak of publick envy. There is yet ſome good in publick envy, whereas in private there is none. For publick envy is as an oſtraciſm, that eclipſeth men when they grow too great: and therefore it is a bridle alſo to great ones, to keep them within bounds.

This envy, being in the *Latin* word *invidia*, goeth in the modern languages by the name of diſcontentment; of which we ſhall ſpeak in handling ſedition. It is a diſeaſe, in a ſtate, like to infection: for as infection ſpreadeth upon that which is ſound, and tainteth it; ſo when envy is gotten once into a ſtate, it traduceth even the beſt actions thereof, and turneth them into an ill odour; and therefore there is little won by intermingling of plauſible actions: for that doth argue but a weakneſs and fear of envy, which hurteth ſo much the more, as it is likewiſe uſual in infections; which if you fear them, you call them upon you.

This publick envy ſeemeth to beat chiefly upon principal officers or miniſters, rather than upon kings and ſtates themſelves. But this is a ſure rule, that if the envy upon the miniſter be great, when the cauſe of it in him is ſmall; or if the envy be general in a manner upon all the miniſters of an eſtate, then the envy (though hidden) is truly upon the ſtate it ſelf. And ſo much of publick envy or diſcontentment, and the difference thereof from private envy, which was handled in the firſt place.

We will add this in general touching the affection of envy; that of all other affections, it is the moſt importune and continual: for of other affections, there is occaſion given but now and then; and therefore it was well ſaid, *Invidia feſtos dies non agit:* for it is ever working upon ſome or other. And it is alſo noted, that love and envy do make a man pine, which other affections do not, becauſe they are not ſo continual. It is alſo the vileſt affection,

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and the moſt depraved; for which cauſe it is the proper attribute of the devil, who is called, *the envious man, that ſoweth tares amongſt the wheat by night.* As it always cometh to paſs, that envy worketh ſubtilly, and in the dark; and to the prejudice of good things, ſuch as is the wheat.

## X. *Of love.*

The ſtage is more beholden to love, than the life of man. For as to the ſtage, love is even matter of comedies, and now and then of tragedies; but in life it doth much miſchief, ſometimes like a ſiren, ſometimes like a fury. You may obſerve, that amongſt all the great and worthy perſons, (whereof the memory remaineth, either ancient or recent,) there is not one that hath been tranſported to the mad degree of love; which ſhews, that great ſpirits, and great buſineſs, do keep out this weak paſſion. You muſt except nevertheleſs *Marcus Antonius* the half partner of the empire of *Rome*, and *Appius Claudius* the *decemvir* and law-giver; whereof the former was indeed a voluptuous man, and inordinate; but the latter was an auſtere and wiſe man: and therefore it ſeems (though rarely) that love can find entrance, not only into an open heart, but alſo into a heart well fortified, if watch be not well kept. It is a poor ſaying of *Epicurus*; *Satis magnum alter alteri theatrum ſumus:* As if man, made for the contemplation of heaven, and all noble objects, ſhould do nothing but kneel before a little idol, and make himſelf ſubject, though not of the mouth, (as beaſts are) yet of the eye, which was given him for higher purpoſes. It is a ſtrange thing to note the exceſs of this paſſion; and how it braves the nature and value of things by this, that the ſpeaking in a perpetual hyperbole, is comely in nothing but in love: neither is it merely in the phraſe; for whereas it hath been well ſaid, that the arch flatterer, with whom all the petty flatterers have intelligence, is a man's ſelf; certainly the lover is more. For there was never proud man thought ſo abſurdly well of himſelf, as the lover doth of the perſon loved; and therefore it was well ſaid, that it is impoſſible to love, and to be wiſe. Neither doth this weakneſs appear to others only, and not to the party loved, but to the loved moſt of all; except the love be reciproque. For it is a true rule, that love is ever rewarded either with the reciproque, or with an inward and ſecret contempt: by how much the more men ought to beware of this paſſion, which loſeth not only other things, but it ſelf. As for the other loſſes, the poet's relation doth well figure them; that he that preferred *Helena*, quitted the gifts of *Juno* and *Pallas:* for whoſoever eſteemeth too much of amorous affection, quitteth both riches and wiſdom. This paſſion hath its floods in the very times of weakneſs, which are, great proſperity, and great adverſity; though this latter hath been leſs obſerved; both which times kindle love, and make it more fervent, and therefore ſhew it to be the child of folly. They do beſt, who, if they cannot but admit love, yet make it keep quarter; and ſever it wholly from their ſerious affairs and actions of life: for if it check once with buſineſs, it troubleth mens fortunes, and maketh men that they can no ways be true to their own ends. I know not how, but martial men are given to love: I think it is, but as they are given to wine; for perils, commonly aſk to be paid in pleaſures. There is in man's nature a ſecret inclination and motion towards love of others, which if it be not ſpent upon ſome one, or a few, doth naturally ſpread it ſelf towards many, and maketh men become humane and charitable; as it is ſeen ſometime in friars. Nuptial love maketh mankind; friendly love perfecteth it; but wanton love corrupteth and embaſeth it.

## XI. *Of great place.*

Men in great place are thrice ſervants; ſervants of the ſovereign or ſtate; ſervants of fame; and ſervants of buſineſs: So as they have no freedom, neither in their perſons, nor in their actions, nor in their times. It is a ſtrange deſire, to ſeek power and to loſe liberty; or to ſeek power over others, and to loſe power over a man's ſelf. The riſing unto place is laborious; and by pains men come to greater pains; and it is ſometimes baſe, and by indignities men come to dignities. The ſtanding is ſlippery, and the regreſs is either a downfall, or at leaſt an eclipſe, which is a melancholy thing. *Cum non ſis, qui fueris, non eſſe, cur velis vivere?* Nay, retire men cannot when they would; neither will they when it were reaſon: but are impatient of privateneſs, even in age and ſickneſs, which require the ſhadow: like old townſmen, that will be ſtill ſitting at their ſtreet door, though thereby they offer age to ſcorn. Certainly great perſons had need to borrow other mens opinions to think themſelves happy; for if they judge by their own feeling, they cannot find it: but if they think with themſelves what other men think of them, and that other men would fain be as they are, then they are happy as it were by report, when perhaps they find the contrary within. For they are the firſt that find their own griefs; though they be the laſt that find their own faults. Certainly men in great fortunes are ſtrangers to themſelves, and while they are in the puzzle of buſineſs, they have no time to tend their health either of body or mind. *Illi mors gravis incubat, qui notus nimis omnibus, ignotus moritur ſibi.* In place there is licence to do good and evil; whereof the latter is a curſe; for in evil the beſt condition is not to will; the ſecond not to can. But power to do good, is the true and lawful end of aſpiring. For good thoughts, (though God accept them) yet towards men are little better than good dreams: except they be put in act; and that cannot be without power and place; as the vantage and commanding ground. Merit and good works is the end of man's motion; and conſcience of the ſame, is the accompliſhment of man's reſt. For if a man can be partaker of God's theater, he ſhall likewiſe be partaker of God's reſt. *Et converſus Deus, ut aſpiceret opera, quae fecerunt manus ſuae, vidit quod omnia eſſent bona nimis*; and then the ſabbath. In the diſcharge of thy place, ſet before thee the beſt examples; for imitation is a globe of precepts. And after a time ſet before thee thine own example; and examine thy ſelf ſtrictly, whether thou didſt not beſt at firſt. Neglect not alſo the examples of thoſe, that have carried themſelves ill in the ſame place: not to ſet off thy ſelf by taxing thy memory; but to direct thy ſelf what to avoid. Reform therefore, without bravery or ſcandal of former times and perſons; but yet ſet it down to thy ſelf, as well to create good precedents, as to follow them. Reduce things to the firſt inſtitution, and obſerve wherein and how they have degenerated; but yet aſk counſel of both times: of the ancient time what is beſt; and of the latter time what is fitteſt. Seek to make thy courſe regular; that men may know before hand what they may expect: but be not too poſitive and peremptory; and expreſs thy ſelf well when thou digreſſeſt from thy rule. Preſerve the right of thy place, but ſtir not queſtions of juriſdiction: and rather aſſume thy right in ſilence, and *de facto*, than voice it with claims and challenges. Preſerve likewiſe the rights of inferiour places; and think it more honour to direct in chief, than to be buſy in all. Embrace and invite helps and advices, touching the execution of thy place: and do not drive away ſuch as bring

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thee information, as medlers; but accept of them in good part. The vices of authority are chiefly four; delays, corruption, roughneſs, and facility. For delays; give eaſy acceſs; keep times appointed; go through with that which is in hand; and interlace not buſineſs but of neceſſity. For corruption; do not only bind thine own hands, or thy ſervants hands, from taking, but bind the hands of ſuitors alſo from offering. For integrity uſed doth the one; but integrity profeſſed, and with a manifeſt deteſtation of bribery, doth the other: And avoid not only the fault, but the ſuſpicion. Whoſoever is found variable, and changeth manifeſtly without manifeſt cauſe, giveth ſuſpicion of corruption. Therefore always when thou changeſt thine opinion or courſe, profeſs it plainly, and declare it, together with the reaſons that move thee to change; and do not think to ſteal it. A ſervant, or a favourite, if he be inward, and no other apparent cauſe of eſteem, is commonly thought but a by-way to cloſe corruption. For roughneſs; it is a needleſs cauſe of diſcontent; ſeverity breedeth fear, but roughneſs breedeth hate. Even reproofs from authority ought to be grave, and not taunting. As for facility, it is worſe than bribery. For bribes come but now and then; but if importunity, or idle reſpects lead a man, he ſhall never be without. So *Solomon* ſaith; *to reſpect perſons is not good*; *for ſuch a man will tranſgreſs for a piece of bread.* It is moſt true that was anciently ſpoken, a place ſheweth the man: and it ſheweth ſome to the better, and ſome to the worſe; *omnium conſenſu*; *capax imperii, niſi imperaſſet*, ſaith *Tacitus* of *Galba*: but of *Veſpaſian* he ſaith; *ſolus imperantium Veſpaſianus mutatus in melius.* Though the one was meant of ſufficiency, the other of manners and affection. It is an aſſured ſign of a worthy and generous ſpirit, whom honour amends. For honour is, or ſhould be the place of virtue: and as in nature things move violently to their place, and calmly in their place; ſo virtue in ambition is violent, in authority ſettled and calm. All riſing to great place, is by a winding ſtair; and if there be factions, it is good to ſide a man's ſelf whilſt he is in the riſing; and to balance himſelf when he is placed. Uſe the memory of thy predeceſſor fairly and tenderly; for if thou doſt not, it is a debt will ſure be paid when thou art gone. If thou have colleagues, reſpect them, and rather call them when they look not for it, than exclude them when they have reaſon to look to be called. Be not too ſenſible, or too remembring of thy place in converſation, and private anſwers to ſuitors; but let it rather be ſaid, when he ſits in place he is another man.

## XII. *Of boldneſs.*

It is a trivial grammar ſchool text, but yet worthy a wiſeman's conſideration. Queſtion was aſked of *Demoſthenes*, what was the chief part of an orator? He anſwered, action. What next? action. What next again? action. He ſaid it that knew it beſt; and had by nature himſelf no advantage in that he commended. A ſtrange thing, that that part of an orator, which is but ſuperficial, and rather the virtue of a player, ſhould be placed ſo high above thoſe other noble parts of invention, elocution, and the reſt: nay almoſt alone, as if it were all in all. But the reaſon is plain. There is in humane nature generally, more of the fool than of the wiſe; and therefore thoſe faculties by which the fooliſh part of mens minds is taken, are moſt potent. Wonderful like is the caſe of boldneſs in civil buſineſs; what firſt? Boldneſs. What ſecond and third? Boldneſs. And yet boldneſs is a child of ignorance and baſeneſs, far inferiour to other parts. But neverthe-

leſs it doth faſcinate, and bind hand and foot, thoſe that are either ſhallow in judgment, or weak in courage, which are the greateſt part; yea, and prevaileth with wiſe men at weak times: therefore we ſee it hath done wonders in popular ſtates, but with ſenates and princes leſs; and more ever upon the firſt entrance of bold perſons into action, than ſoon after; for boldneſs is an ill keeper of promiſe. Surely, as there are mountebanks for the natural body, ſo are there mountebanks for the politick body: men that undertake great cures, and perhaps have been lucky in two to three experiments, but want the grounds of ſcience, and therefore cannot hold out: nay, you ſhall ſee a bold fellow many times do *Mahomet*'s miracle. *Mahomet* made the people believe that he would call an hill to him, and from the top of it offer up his prayers for the obſervers of his law. The people aſſembled: *Mahomet* call'd the hill to come to him again and again; and when the hill ſtood ſtill he was never a whit abaſhed, but ſaid, if the hill will not come to *Mahomet*, *Mahomet* will go to the hill. So theſe men, when they have promiſed great matters, and failed moſt ſhamefully, yet (if they have the perfection of boldneſs) they will but ſlight it over, and make a turn, and no more ado. Certainly to men of great judgment, bold perſons are a ſport to behold; nay, and to the vulgar alſo, boldneſs hath ſomewhat of the ridiculous: for if abſurdity be the ſubject of laughter, doubt you not but great boldneſs is ſeldom without ſome abſurdity: eſpecially it is a ſport to ſee when a bold fellow is out of countenance, for that puts his face into a moſt ſhrunken and wooden poſture, as needs it muſt; for in baſhfulneſs the ſpirits do a little go and come; but with bold men, upon like occaſion, they ſtand at a ſtay; like a ſtale at cheſs, where it is no mate, but yet the game cannot ſtir: but this laſt were fitter for a ſatyr, than for a ſerious obſervation. This is well to be weighed, that boldneſs is ever blind; for it ſeeth not dangers and inconveniences: therefore it is ill in counſel, good in execution: ſo that the right uſe of bold perſons is, that they never command in chief, but be ſeconds, and under the direction of others. For in counſel, it is good to ſee dangers; and in execution not to ſee them, except they be very great.

## XIII. *Of goodneſs, and goodneſs of nature.*

I take goodneſs in this ſenſe, the affecting of the weal of men, which is that the *Graecians* call *Philanthropia*; and the word humanity (as it is uſed) is a little too light to expreſs it. Goodneſs I call the habit, and goodneſs of nature the inclination. This of all virtues and dignities of the mind is the greateſt, being the character of the Deity; and without it man is a buſy, miſchievous, wretched thing, no better than a kind of vermin. Goodneſs anſwers to the theological virtue charity, and admits no exceſs but error. The deſire of power in exceſs cauſed the angels to fall; the deſire of knowledge in exceſs cauſed man to fall: but in charity there is no exceſs; neither can angel or man come in danger by it. The inclination to goodneſs is imprinted deeply in the nature of man; inſomuch, that if it iſſue not towards men, it will take unto other living creatures; as it is ſeen in the *Turks*, a cruel people, who nevertheleſs are kind to beaſts, and give alms to dogs and birds: inſomuch as *Buſbechius* reporteth, a Chriſtian boy in *Conſtantinople* had like to have been ſtoned for gagging, in a waggiſhneſs, a long-billed fowl. Errors indeed in this virtue of goodneſs or charity, may be committed. The *Italians* have an ungracious proverb; *Tanto buon che val niente*; ſo good, that he is good for nothing. And one of the doctors of *Italy*,

*Italy*, *Nicholas Machiavel*, had the confidence to put in writing, almoſt in plain terms, that the Chriſtian faith had given up good men in prey to thoſe that are tyrannical and unjuſt: which he ſpake, becauſe indeed there was never law, or ſect, or opinion, did ſo much magnify goodneſs, as the Chriſtian religion doth: therefore to avoid the ſcandal, and the danger both, it is good to take knowledge of the errors of an habit ſo excellent. Seek the good of other men, but be not in bondage to their faces, or fancies; for that is but facility or ſoftneſs, which taketh an honeſt mind priſoner. Neither give thou *AEſop's* cock a gem, who would be better pleaſed, and happier if he had a barley corn. The example of God teacheth the leſſon truly; *he ſendeth his rain, and maketh his ſun to ſhine upon the juſt and the unjuſt*; but he doth not rain wealth, nor ſhine honour and virtues upon men equally: common benefits are to be communicated with all, but peculiar benefits with choice. And beware, how in making the portraiture thou breakeſt the pattern, for divinity maketh the love of ourſelves the pattern; the love of our neighbours but the portraiture: *Sell all thou haſt, and give it to the poor, and follow me.* But ſell not all thou haſt, except thou come and follow me; that is, except thou have a vocation, wherein thou mayeſt do as much good with little means as with great: for otherwiſe, in feeding the ſtreams, thou dryeſt the fountain. Neither is there only a habit of goodneſs directed by right reaſon; but there is in ſome men, even in nature, a diſpoſition towards it; as on the other ſide there is a natural malignity. For there be, that in their nature do not affect the good of others. The lighter ſort of malignity turneth but to a croſſneſs, or frowardneſs, or aptneſs to oppoſe, or difficilneſs, or the like; but the deeper ſort to envy, and mere miſchief. Such men, in other mens calamities, are as it were in ſeaſon, and are ever on the loading part; not ſo good as the dogs that licked *Lazarus* ſores, but like flies that are ſtill buzzing upon any thing that is raw; *Miſanthropi*, that make it their practice to bring men to the bough, and yet have never a tree for the purpoſe in their gardens, as *Timon* had: ſuch diſpoſitions are the very errors of humane nature; and yet they are the fitteſt timber to make great politicks of; like to knee timber that is good for ſhips that are ordained to be toſſed, but not for building houſes that ſhall ſtand firm. The parts and ſigns of goodneſs are many. If a man be gracious and courteous to ſtrangers, it ſhews he is a citizen of the world, and that his heart is no iſland cut off from other lands, but a continent that joins to them. If he be compaſſionate towards the afflictions of others, it ſhews that his heart is like the noble tree that is wounded itſelf, when it gives the balm. If he eaſily pardons and remits offences, it ſhews that his mind is planted above injuries, ſo that he cannot be ſhot. If he be thankful for ſmall benefits, it ſhews that he weighs mens minds, and not their traſh. But above all, if he have St. *Paul's* perfection, that he would wiſh to be an *anathema* from *Chriſt*, for the ſalvation of his brethren, it ſhews much of a divine nature, and a kind of conformity with *Chriſt* himſelf.

## XIV. *Of a king.*

1. A king is a mortal god on earth, unto whom the living God hath lent his own name as a great honour; but withal told him, he ſhould die like a man, leſt he ſhould be proud and flatter himſelf, that God hath with his name imparted unto him his nature alſo.

2. Of all kind of men, God is the leaſt beholden unto them; for he doth moſt for them, and they do ordinarily leaſt for him.

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3. A king that would not feel his crown too heavy for him, must wear it every day; but if he think it too light, he knoweth not of what metal it is made.

4. He must make religion the rule of government, and not to balance the scale; for he that casteth in religion only to make the scales even, his own weight is contained in those characters, *Mene, mene, tekel, upharsin, he is found too light, his kingdom shall be taken from him.*

5. And that king that holds not religion the best reason of state, is void of all piety and justice, the supporters of a king.

6. He must be able to give counsel himself, but not to rely thereupon; for though happy events justify their counsels, yet it is better that the evil event of good advice be rather imputed to a subject than a sovereign.

7. He is the fountain of honour, which should not run with a waste pipe, lest the courtiers sell the water, and then (as papists say of their holy wells) it loses the virtue.

8. He is the life of the law, not only as he is *lex loquens* himself, but because he animateth the dead letter, making it active towards all his subjects, *praemio & poena.*

9. A wise king must do less in altering his laws than he may; for new government is ever dangerous. It being true in the body politick, as in the corporal, that *omnis subita immutatio est periculosa*; and though it b the better, yet it is not without a fearful apprehension; for he that changeth the fundamental laws of a kingdom, thinketh there is no good title to a crown, but by conquest.

10. A king that setteth to sale seats of justice, oppresseth the people; for he teacheth his judges to sell justice; and *precio parata precio venditur justitia.*

11. Bounty and magnificence are virtues very regal, but a prodigal king is nearer a tyrant than a parsimonious; for store at home draweth not his contemplations abroad; but want supplieth it self of what is next, and many times the next way: a king herein must be wise, and know what he may justly do.

12. That king which is not feared, is not loved; and he that is well seen in his craft, must as well study to be feared as loved; yet not loved for fear, but feared for love.

13. Therefore, as he must always resemble him whose great name he beareth, and that as in manifesting the sweet influence of his mercy on the severe stroke of his justice sometimes, so in this not to suffer a man of death to live; for besides that the land doth mourn, the restraint of justice towards sin, doth more retard the affection of love, than the extent of mercy doth enflame it; and sure where love is [ill] bestowed, fear is quite lost.

14. His greatest enemies are his flatterers; for though they ever speak on his side, yet their words still make against him.

15. The love which a king oweth to a weal publick, should not be restrained to any one particular; yet that his more special favour do reflect upon some worthy ones, is somewhat necessary, because there are few of that capacity.

16. He must have a special care of five things, if he would not have his crown to be but to him *infelix felicitas.*

First, that *simulata sanctitas* be not in the church; for that is *duplex iniquitas.*

Secondly,

SECONDLY, that *inutilis aequitas* ſit not in the chancery; for that is *inepta miſericordia.*

THIRDLY, that *utilis iniquitas* keep not the exchequer; for that is *crudele latrocinium.*

FOURTHLY, that *fidelis temeritas* be not his general; for that will bring but *ſeram poenitentiam.*

FIFTHLY, that *infidelis prudentia* be not his general; for that is *anguis ſub viridi herba.*

To conclude; as he is of the greateſt power, ſo he is ſubject to the greateſt cares, made the ſervant of his people, or elſe he were without a calling at all.

HE then that honoureth him not is next an atheiſt, wanting the fear of God in his heart.

## XV. *Of nobility.*

WE will ſpeak of nobility firſt as a portion of an eſtate, then as a condition of particular perſons. A monarchy, where there is no nobility at all, is ever a pure and abſolute tyranny; as that of the *Turks:* for nobility attempers ſovereignty, and draws the eyes of the people ſomewhat aſide from the line royal. But for democracies they need it not; and they are commonly more quiet, and leſs ſubject to ſedition, than where there are ſtirps of nobles; for mens eyes are upon the buſineſs, and not upon the perſons: or if upon the perſons, it is for the buſineſs ſake, as fitteſt, and not for flags and pedigree. We ſee the *Switzers* laſt well, notwithſtanding their diverſity of religion, and of cantons: for utility is their bond, and not reſpects. The United Provinces of the *Low Countries*, in their government, excel: for where there is an equality, the conſultations are more indifferent, and the payments and tributes more chearful. A great and potent nobility addeth majeſty to a monarch, but diminiſheth power; and putteth life and ſpirit into the people, but preſſeth their fortune. It is well when nobles are not too great for ſovereignty, nor for juſtice; and yet maintained in that height, as the inſolency of inferiors may be broken upon them, before it come on too faſt upon the majeſty of kings. A numerous nobility cauſeth poverty and inconvenience in a ſtate, for it is a ſurcharge of expence; and beſides, it being of neceſſity that many of the nobility fall in time to be weak in fortune, it maketh a kind of diſproportion between honour and means.

As for nobility in particular perſons: It is a reverend thing to ſee an ancient caſtle or building not in decay; or to ſee a fair timber tree ſound and perfect; how much more to behold an ancient noble family, which hath ſtood againſt the waves and weathers of time? for new nobility is but the act of power, but ancient nobility is the act of time. Thoſe that are firſt raiſed to nobility, are commonly more virtuous, but leſs innocent, than their deſcendents; for there is rarely any riſing, but by a commixture of good and evil arts: but it is reaſon the memory of their virtues remain to their poſterity, and their faults die with themſelves. Nobility of birth commonly abateth induſtry; and he that is not induſtrious, envieth him that is. Beſides, noble perſons cannot go much higher; and he that ſtandeth at a ſtay, when others riſe, can hardly avoid motion of envy. On the other ſide, nobility extinguiſheth the paſſive envy from others towards them, becauſe they are in poſſeſſion of honour. Certainly kings that have able men of their nobility, ſhall find eaſe in employing them, and a better ſlide into their buſineſs: for people naturally bend to them, as born in ſome ſort to command.

XVI. *Of*

## XVI. *Of ſeditions and troubles.*

Shepherds of people had need know the kalendars of tempeſts in ſtate; which are commonly greateſt when things grow to equality; as natural tempeſts are greateſt about the *aequinoctia.* And as there are certain hollow blaſts of wind, and ſecret ſwellings of ſeas, before a tempeſt, ſo are there in ſtates:

——— *Ille etiam caecos inſtare tumultus*
*Saepe monet, fraudeſque & operta tumeſcere bella.*

Libels, and licentious diſcourſes againſt the ſtate, when they are frequent and open; and in like ſort falſe news often running up and down to the diſadvantage of the ſtate, and haſtily embraced, are amongſt the ſigns of troubles. *Virgil* giving the pedigree of fame, ſaith, ſhe was ſiſter to the giants.

*Illam terra parens, ira irritata deorum,*
*Extremam (ut perhibent) Coeo Enceladoque ſororem*
*Progenuit.* ——— AEneid. IV. 177.

As if fames were the reliques of ſeditions paſt: but they are no leſs indeed the preludes of ſeditions to come. Howſoever he noteth it right, that ſeditious tumults, and ſeditious fames, differ no more, but as brother and ſiſter, maſculine and feminine; eſpecially if it come to that, that the beſt actions of a ſtate, and the moſt plauſible, and which ought to give greateſt contentment, are taken in ill ſenſe and traduced: for that ſhews the envy great, as *Tacitus* ſaith; *conflata magna invidia, ſeu bene, ſeu male, geſta premunt.* Neither doth it follow, that becauſe theſe fames are a ſign of troubles, that the ſuppreſſing of them with too much ſeverity, ſhould be a remedy of troubles. For the deſpiſing of them many times checks them beſt; and the going about to ſtop them, doth but make a wonder long-lived. Alſo that kind of obedience which *Tacitus* ſpeaketh of, is to be held ſuſpected; *Erant in officio, ſed tamen qui mallent mandata imperantium interpretari, quam exequi*; diſputing, excuſing, cavilling upon mandates and directions, is a kind of ſhaking off the yoke, and aſſay of diſobedience: eſpecially if in thoſe diſputings, they which are for the direction, ſpeak fearfully and tenderly; and thoſe that are againſt it, audaciouſly.

Also, as *Machiavel* noteth well, when princes that ought to be common parents, make themſelves as a party, and lean to a ſide, it is as a boat that is overthrown by uneven weight on the one ſide: as was well ſeen in the time of *Henry* the third of *France*; for firſt, himſelf entred league for the extirpation of the proteſtants; and preſently after the ſame league was turned upon himſelf. For when the authority of princes is made but an acceſſary to a cauſe; and that there be other bands that tie faſter than the band of ſovereignty, kings begin to be put almoſt out of poſſeſſion.

Also, when diſcords, and quarrels, and factions, are carried openly and audaciouſly; it is a ſign the reverence of government is loſt. For the motions of the greateſt perſons in a government, ought to be as the motions of the planets under *primum mobile,* (according to the old opinion;) which is, that every of them is carried ſwiftly by the higheſt motion, and ſoftly in their own motion. And therefore when great ones in their own particular motion move violently, and as *Tacitus* expreſſeth it well, *liberius, quam ut imperantium meminiſſent*; it is a ſign the orbs are out of frame. For reve-

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rence is that wherewith princes are girt from God, who threatneth the diſſolving thereof; *ſolvam cingula regum*.

So when any of the four pillars of government are mainly ſhaken, or weakned, (which are religion, juſtice, counſel and treaſure,) men had need to pray for fair weather. But let us paſs from this part of predictions, (concerning which, nevertheleſs, more light may be taken from that which followeth,) and let us ſpeak firſt of the materials of ſeditions; then of the motives of them; and thirdly of the remedies.

Concerning the materials of ſedition. It is a thing well to be conſidered: for the ſureſt way to prevent ſeditions, (if the times do bear it,) is to take away the matter of them. For if there be fuel prepared, it is hard to tell whence the ſpark ſhall come, that ſhall ſet it on fire. The matter of ſeditions is of two kinds; much poverty and much diſcontentment. It is certain, ſo many overthrown eſtates, ſo many votes for troubles. *Lucan* noteth well the ſtate of *Rome*, before the civil war;

*Hinc uſura vorax, rapidumque in tempore fœnus,*
*Hinc concuſſa fides, & multis utile bellum.*

This ſame *multis utile bellum*, is an aſſured and infallible ſign, of a ſtate diſpoſed to ſeditions and troubles. And if this poverty and broken eſtate in the better ſort, be joined with a want and neceſſity in the mean people, the danger is imminent and great. For the rebellions of the belly are the worſt. As for diſcontentments, they are in the politick body, like to humours in the natural, which are apt to gather a preternatural heat, and to enflame. And let no prince meaſure the danger of them, by this; whether they be juſt, or unjuſt; for that were to imagine people to be too reaſonable; who do often ſpurn at their own good: not yet by this; whether the griefs whereupon they riſe, be in fact great or ſmall. For they are the moſt dangerous diſcontentments, where the fear is greater than the feeling. *Dolendi modus, timendi non item.* Beſides, in great oppreſſions, the ſame things that provoke the patience, do withal mate the courage: but in fears it is not ſo. Neither let any prince or ſtate be ſecure concerning diſcontentments, becauſe they have been often, or have been long, and yet no peril hath enſued; for as it is true that every vapour, or fume, doth not turn into a ſtorm; ſo it is nevertheleſs true, that ſtorms, though they blow over divers times, yet may fall at laſt; and as the *Spaniſh* proverb noteth well, the cord breaketh at the laſt by the weakeſt pull.

The cauſes and motives of ſeditions are, innovation in religion, taxes, alterations of laws and cuſtoms, breaking of privileges, general oppreſſion, advancement of unworthy perſons, ſtrangers, dearths, diſbanded ſoldiers, factions grown deſperate: And whatſoever in offending people, joineth and knitteth them in a common cauſe.

For the remedies, there may be ſome general preſervatives, whereof we will ſpeak; as for the juſt cure, it muſt anſwer to the particular diſeaſe: and ſo be left to counſel, rather than rule.

The firſt remedy or prevention, is to remove by all means poſſible, that material cauſe of ſedition, whereof we ſpeak; which is want and poverty in the eſtate. To which purpoſe, ſerveth the opening, and well balancing of trade; the cheriſhing of manufactures; the baniſhing of idleneſs; the repreſſing of waſte and exceſs by ſumptuary laws; the improvement and huſbanding of the ſoil, the regulating of prices of things vendible; the moderating of taxes and tributes, and the like. Generally it is to be foreſeen,

that the population of a kingdom (eſpecially if it be not mown down by wars) do not exceed the ſtock of the kingdom, which ſhould maintain them. Neither is the population to be reckoned, only by number: for a ſmaller number, that ſpend more, and earn leſs, do wear out an eſtate, ſooner than a greater number that live lower, and gather more. Therefore the multiplying of nobility, and other degrees of quality, in an over proportion, to the common people, doth ſpeedily bring a ſtate to neceſſity: and ſo doth likewiſe an overgrown Clergy; for they bring nothing to the ſtock; and in like manner, when more are bred ſcholars, than preferments can take off.

It is likewiſe to be remembred, that foraſmuch as the increaſe of any eſtate muſt be upon the foreigner, (for whatſoever is ſomewhere gotten is ſomewhere loſt) there be but three things which one nation ſelleth unto another; the commodity as nature yieldeth it; the manufacture; and the vecture or carriage. So that if theſe three wheels go, wealth will flow as in a ſpring tide. And it cometh many times to paſs, that *materiam ſuperabit opus*; that the work and carriage is more worth than the material, and enricheth a ſtate more; as is notably ſeen in the *Low-Countrey* men, who have the beſt mines above ground in the world.

Above all things good policy is to be uſed, that the treaſure and moneys in a ſtate, be not gathered into few hands. For otherwiſe a ſtate may have a great ſtock and yet ſtarve. And money is like muck, not good except it be ſpread. This is done chiefly by ſuppreſſing, or at the leaſt keeping a ſtrait hand upon the devouring trades of uſury, ingroſſing, great paſturages, and the like.

For removing diſcontentments, or at leaſt the danger of them, there is in every ſtate (as we know) two portions of ſubjects, the nobles, and the commonalty. When one of theſe is diſcontent, the danger is not great; for common people are of ſlow motion, if they be not excited by the greater ſort; and the greater ſort are of ſmall ſtrength, except the multitude be apt and ready to move of themſelves. Then is the danger, when the greater ſort do but wait for the troubling of the waters amongſt the meaner, that then they may declare themſelves. The poets feign, that the reſt of the Gods would have bound *Jupiter*; which he hearing of, by the counſel of *Pallas*, ſent for *Briareus* with his hundred hands to come in to his aid. An emblem no doubt to ſhew, how ſafe it is for monarchs to make ſure of the good will of common people.

To give moderate liberty, for griefs and diſcontentments to evaporate, (ſo it be without too great inſolency or bravery) is a ſafe way. For he that turneth the humours back, and maketh the wound bleed inwards, endangereth malign ulcers and pernicious impoſtumations.

The part of *Epimetheus* might well become *Prometheus*, in the caſe of diſcontentments, for there is not a better proviſion againſt them. *Epimetheus*, when griefs and evils flew abroad, at laſt ſhut the lid, and kept hope in the bottom of the veſſel. Certainly the politick and artificial nouriſhing and entertaining of hopes, and carrying men from hopes to hopes, is one of the beſt antidotes againſt the poiſon of diſcontentments. And it is a certain ſign of a wiſe government and proceeding, when it can hold mens hearts by hopes, when it cannot by ſatisfaction: and when it can handle things in ſuch manner, as no evil ſhall appear ſo peremptory, but that it hath ſome outlet of hope; which is the leſs hard to do, becauſe both particular perſons

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and factions are apt enough to flatter themſelves, or at leaſt to brave that which they believe not.

Also, the foreſight and prevention that there be no likely or fit head, whereunto diſcontented perſons may reſort, and under whom they may join, is a known but an excellent point of caution. I underſtand a fit head, to be one that hath greatneſs and reputation; that hath confidence with the diſcontented party, and upon whom they turn their eyes; and that is thought diſcontented in his own particular; which kind of perſons are either to be won and reconciled to the ſtate, and that in a faſt and true manner; or to be fronted with ſome other of the ſame party that may oppoſe them, and ſo divide the reputation. Generally, the dividing and breaking of all factions and combinations that are adverſe to the ſtate, and ſetting them at diſtance, or at leaſt diſtruſt amongſt themſelves, is not one of the worſt remedies. For it is a deſperate caſe, if thoſe that hold with the proceeding of the ſtate, be full of diſcord and faction; and thoſe that are againſt it be entire and united.

I have noted, that ſome witty and ſharp ſpeeches which have fallen from princes, have given fire to ſeditions. *Caeſar* did himſelf infinite hurt in that ſpeech; *Sylla neſcivit literas, non potuit dictare*: for it did utterly cut off that hope which men had entertained, that he would at one time or other give over his dictatorſhip. *Galba* undid himſelf by that ſpeech; *legi a ſe militem, non emi:* for it put the ſoldiers out of hopes of the donative. *Probus* likewiſe by that ſpeech, *ſi vixero, non opus erit amplius Romano imperio militibus*; a ſpeech of great deſpair for the ſoldiers; and many the like. Surely, princes had need in tender matter and tickliſh times to beware what they ſay; eſpecially in theſe ſhort ſpeeches which fly abroad like darts, and are thought to be ſhot out of their ſecret intentions. For as for large diſcourſes, they are flat things, and not ſo much noted.

Lastly, let princes againſt all events, not be without ſome great perſon, one, or rather more, of military valour near unto them, for the repreſſing of ſeditions in their beginnings. For without that, there uſeth to be more trepidation in court upon the firſt breaking out of troubles, than were fit. And the ſtate runneth the danger of that which *Tacitus* ſaith, *atque is habitus animorum fuit, ut peſſimum facinus auderent pauci, plures vellent, omnes paterentur.* But let ſuch military perſons be aſſured and well reputed of, rather than factious and popular; holding alſo good correſpondence with the other great men in the ſtate; or elſe the remedy is worſe than the diſeaſe.

## XVII. *Of atheiſm.*

I had rather believe all the fables in the legend, and the Talmud, and the Alcoran, than that this univerſal frame is without mind. And therefore God never wrought miracle to convince atheiſm, becauſe his ordinary works convince it. It is true, that a little philoſophy inclineth man's mind to atheiſm; but depth in philoſophy bringeth mens minds about to religion: for while the mind of man looketh upon ſecond cauſes ſcattered, it may ſometimes reſt in them and go no farther; but when it beholdeth the chain of them confederate and linked together, it muſt need fly to Providence and Deity. Nay even that ſchool which is moſt accuſed of atheiſm, doth moſt demonſtrate religion: that is, the ſchool of *Leucippus*, and *Democritus*, and *Epicurus*. For it is a thouſand times more credible, that four mutable elements, and one immutable fifth eſſence duly and eternally placed, need no God; than that an army of infinite ſmall portions, or ſeeds unplaced,

ſhould have produced this order and beauty without a divine marſhal. The ſcripture ſaith, *The fool hath ſaid in his heart, there is no God:* it is not ſaid, *the fool hath thought in his heart.* So as he rather ſaith it by rote to himſelf, as that he would have, than that he can throughly believe it, or be perſuaded of it. For none deny there is a God, but thoſe for whom it maketh that there were no God. It appeareth in nothing more, that atheiſm is rather in the lip than in the heart of man, than by this; that atheiſts will ever be talking of that their opinion, as if they fainted in it within themſelves, and would be glad to be ſtrengthened by the conſent of others: nay more, you ſhall have atheiſts ſtrive to get diſciples, as it fareth with other ſects; and, which is moſt of all, you ſhall have of them that will ſuffer for atheiſm, and not recant: whereas if they did truly think that there were no ſuch thing as God, why ſhould they trouble themſelves? *Epicurus* is charged, that he did but diſſemble for his credit's ſake, when he affirmed, there were bleſſed natures, but ſuch as enjoyed themſelves without having reſpect to the government of the world. Wherein they ſay he did temporize, though in ſecret he thought there was no God. But certainly he is traduced; for his words are noble and divine: *Non deos vulgi negare profanum; ſed vulgi opiniones diis applicare profanum. Plato* could have ſaid no more. And although he had the confidence to deny the adminiſtration, he had not the power to deny the nature. The *Indians* of the weſt, have names for their particular gods, though they have no name for God: as if the heathens ſhould have had the names *Jupiter, Apollo, Mars, &c.* but not the word, *Deus:* which ſhews, that even thoſe barbarous people have the notion, though they have not the latitude and extent of it. So that againſt atheiſts, the very ſavages take part with the very ſubtileſt philoſophers. The contemplative atheiſt is rare; a *Diagoras*, a *Bion*, a *Lucian* perhaps, and ſome others; and yet they ſeem to be more than they are; for that all that impugn a received religion, or ſuperſtition, are by the adverſe part branded with the name of atheiſts. But the great atheiſts indeed are hypocrites; which are ever handling holy things, but without feeling: ſo as they muſt needs be cauterized in the end. The cauſes of atheiſm are; diviſions in religion, if they be many; for any one main diviſion addeth zeal to both ſides; but many diviſions introduce atheiſm. Another is, ſcandal of prieſts; when it is come to that which S. *Bernard* ſaith, *non eſt jam dicere, ut populus, ſic ſacerdos: quia nec ſic populus, ut ſacerdos.* A third is, cuſtom of profane ſcoffing in holy matters; which doth by little and little deface the reverence of religion. And laſtly, learned times, eſpecially with peace and proſperity: for troubles and adverſities do more bow mens minds to religion. They that deny a God, deſtroy man's nobility: for certainly man is of kin to the beaſts by his body; and if he be not of kin to God by his ſpirit, he is a baſe and ignoble creature. It deſtroys likewiſe magnanimity, and the raiſing of humane nature: for take an example of a dog, and mark what a generoſity and courage he will put on, when he finds himſelf maintained by a man; who to him is inſtead of a God, or *melior natura:* which courage is manifeſtly ſuch, as that creature without that confidence of a better nature than his own could never attain. So man, when he reſteth and aſſureth himſelf upon divine protection and favour, gathereth a force and faith, which humane nature in it ſelf could not obtain: Therefore as atheiſm is in all reſpects hateful, ſo in this, that it depriveth humane nature of the means to exalt it ſelf above humane frailty. As it is in particular perſons, ſo it is in nations: never was there ſuch a ſtate for magnanimity

mity as *Rome*; of this ſtate hear what *Cicero* ſaith: *Quam volumus, licet, patres conſcripti, nos amemus, tamen nec numero Hiſpanos, nec robore Gallos, nec calliditate Poenos, nec artibus Graecos, nec denique hoc ipſo hujus gentis & terrae domeſtico nativoque ſenſu Italos ipſos & Latinos; ſed pietate, ac religione, atque hac una ſapientia, quod deorum immortalium numine, omnia regi, gubernarique perſpeximus, omnes gentes nationeſque ſuperavimus.*

## XVIII. *Of ſuperſtition.*

It were better to have no opinion of God at all, than ſuch an opinion as is unworthy of him: for the one is unbelief, the other is contumely: and certainly ſuperſtition is the reproach of the Deity. *Plutarch* ſaith well to that purpoſe: ſurely (ſaith he) I had rather a great deal men ſhould ſay there was no ſuch man at all as *Plutarch*, than that they ſhould ſay, that there was one *Plutarch*, that would eat his children as ſoon as they were born; as the poets ſpeak of *Saturn*. And as the contumely is greater towards God, ſo the danger is greater towards men. Atheiſm leaves a man to ſenſe, to philoſophy, to natural piety, to laws, to reputation; all which may be guides to an outward moral virtue, though religion were not; but ſuperſtition diſmounts all theſe, and erecteth an abſolute monarchy in the minds of men. Therefore atheiſm did never perturb ſtates; for it makes men wary of themſelves, as looking no farther: and we ſee the times inclined to atheiſm (as the time of *Auguſtus Caeſar*) were civil times. But ſuperſtition hath been the confuſion of many ſtates; and bringeth in a new *primum mobile*, that raviſheth all the ſpheres of government. The maſter of ſuperſtition is the people; and in all ſuperſtition wiſe men follow fools; and arguments are fitted to practice in a reverſed order. It was gravely ſaid by ſome of the prelates in the council of *Trent*, where the doctrine of the ſchoolmen bare great ſway; that the ſchoolmen were like aſtronomers, which did feign eccentricks and epicycles, and ſuch engines of orbs, to ſave the *phaenomena*, though they knew there were no ſuch thing; and in like manner, that the ſchoolmen had framed a number of ſubtile and intricate axioms and theorems, to ſave the practice of the church. The cauſes of ſuperſtition are: pleaſing and ſenſual rites and ceremonies: exceſs of outward and phariſaical holineſs: over-great reverence of traditions, which cannot but load the church: the ſtratagems of prelates for their own ambition and lucre: the favouring too much of good intentions, which openeth the gate to conceits and novelties: the taking an aim at divine matters by humane, which cannot but breed mixture of imaginations: and laſtly, barbarous times, eſpecially joined with calamities and diſaſters. Superſtition without a vail is a deformed thing: for as it addeth deformity to an ape to be ſo like a man; ſo the ſimilitude of ſuperſtition to religion, makes it the more deformed. And as wholeſome meat corrupteth to little worms; ſo good forms and orders corrupt into a number of petty obſervances. There is a ſuperſtition in avoiding ſuperſtition; when men think to do beſt, if they go fartheſt from the ſuperſtition formerly received: therefore care would be had, that (as it fareth in ill purgings) the good be not taken away with the bad, which commonly is done when the people is the reformer.

## XIX. *Of travel.*

Travel in the younger ſort is a part of education; in the elder a part of experience. He that travelleth into a countrey before he hath ſome entrance

entrance into the language, goeth to ſchool, and not to travel. That young men travel under ſome tutor, or grave ſervant, I allow well; ſo that he be ſuch a one that hath the language, and hath been in the countrey before; whereby he may be able to tell them what things are worthy to be ſeen in the countrey where they go, what acquaintances they are to ſeek, what exerciſes or diſcipline the place yieldeth. For elſe young men ſhall go hooded, and look abroad little. It is a ſtrange thing, that in ſea-voyages where there is nothing to be ſeen but ſky and ſea, men ſhould make diaries; but in land travel, wherein ſo much is to be obſerved, for the moſt part they omit it; as if chance were fitter to be regiſtred than obſervation. Let diaries therefore be brought in uſe. The things to be ſeen and obſerved are; the courts of princes, eſpecially when they give audience to ambaſſadors: the courts of juſtice while they ſit and hear cauſes; and ſo of conſiſtories eccleſiaſtick: the churches and monaſteries, with the monuments which are therein extant: the walls and fortifications of cities and towns; and ſo the havens and harbours, antiquities and ruins, libraries, colleges, diſputations, and lectures, where any are; ſhipping and navies; houſes, and gardens of ſtate and pleaſure near great cities; armories, arſenals, magazines, exchanges, burſes, ware-houſes, exerciſes of horſemanſhip, fencing, training of ſoldiers, and the like; comedies, ſuch whereunto the better ſort of perſons do reſort, treaſuries of jewels and robes, cabinets and rarities: and to conclude, whatſoever is memorable in the places where they go. After all which, the tutors or ſervants ought to make diligent enquiry. As for triumphs, maſks, feaſts, weddings, funerals, capital executions, and ſuch ſhews, men need not to be put in mind of them; yet are they not to be neglected. If you will have a young man to put his travels into a little room, and in ſhort time to gather much, this you muſt do: firſt, as was ſaid, he muſt have ſome entrance into the language before he goeth. Then he muſt have ſuch a ſervant, or tutor, as knoweth the countrey, as was likewiſe ſaid. Let him carry with him alſo ſome card or book deſcribing the countrey where he travelleth, which will be a good key to his enquiry. Let him keep alſo a diary. Let him not ſtay long in one city or town, more or leſs as the place deſerveth, but not long: nay, when he ſtayeth in one city or town, let him change his lodging from one end and part of the town to another, which is a great adamant of acquaintance. Let him ſequeſter himſelf from the company of his countrey-men, and diet in ſuch places where there is good company of the nation where he travelleth. Let him upon his removes from one place to another, procure recommendation to ſome perſon of quality reſiding in the place whither he removeth; that he may uſe his favour in thoſe things he deſireth to ſee or know. Thus he may abridge his travel with much profit. As for the acquaintance which is to be ſought in travel, that which is moſt of all profitable, is acquaintance with the ſecretaries and employ'd men of ambaſſadors; for ſo in travelling in one countrey he ſhall ſuck the experience of many. Let him alſo ſee and viſit eminent perſons in all kinds, which are of great name abroad; that he may be able to tell how the life agreeth with the fame. For quarrels, they are with care and diſcretion to be avoided: they are commonly for miſtreſſes, healths, place, and words. And let a man beware how he keepeth company with cholerick and quarrelſome perſons; for they will engage him into their own quarrels. When a traveller returneth home, let him not leave the countries where he hath travelled altogether behind him; but maintain a correſpondence by letters, with thoſe of his acquaintance

which are of moſt worth. And let his travel appear rather in his diſcourſe, than in his apparel or geſture; and in his diſcourſe, let him be rather adviſed in his anſwers, than forward to tell ſtories: and let it appear that he doth not change his countrey manners for thoſe of foreign parts; but only prick in ſome flowers of that he hath learned abroad, into the cuſtoms of his own countrey.

## XX. *Of empire.*

It is a miſerable ſtate of mind to have few things to deſire, and many things to fear: and yet that commonly is the caſe of kings, who being at the higheſt, want matter of deſire, which makes their minds more languiſhing: and have many repreſentations of perils and ſhadows, which make their minds the leſs clear. And this is one reaſon alſo of that effect which the ſcripture ſpeaketh of, *that the king's heart is inſcrutable.* For multitude of jealouſies, and lack of ſome predominant deſire, that ſhould marſhal and put in order all the reſt, maketh any man's heart hard to find or found. Hence it comes likewiſe, that princes many times make themſelves deſires, and ſet their hearts upon toys; ſometimes upon a building; ſometimes upon erecting of an order; ſometimes upon the advancing of a perſon; ſometimes upon obtaining excellency in ſome art, or feat of the hand; as *Nero* for playing on the harp; *Domitian* for certainty of the hand with the arrow; *Commodus* for playing at fence; *Caracalla* for driving chariots, and the like. This ſeemeth incredible unto thoſe that know not the principle; that the mind of man is more cheared and refreſhed by profiting in ſmall things, than by ſtanding at a ſtay in great. We ſee alſo that kings that have been fortunate conquerors in their firſt years, it being not poſſible for them to go forward infinitely, but that they muſt have ſome check or arreſt in their fortunes; turn in their latter years to be ſuperſtitious and melancholy: as did *Alexander* the *Great*, *Dioclefian*, and in our memory *Charles* the fifth, and others: for he that is uſed to go forward, and findeth a ſtop, falleth out of his own favour, and is not the thing he was.

To ſpeak now of the true temper of empire: it is a thing rare and hard to keep; for both temper and diſtemper conſiſt of contraries. But it is one thing to mingle contraries, another to interchange them. The anſwer of *Apollonius* to *Veſpaſian*, is full of excellent inſtruction: *Veſpaſian* aſked him, what was *Nero*'s overthrow? He anſwered, *Nero* could touch and tune the harp well, but in government ſometimes he uſed to wind the pins too high, ſometimes let them down too low. And certain it is that nothing deſtroyeth authority ſo much, as the unequal and untimely interchange of power preſſed too far, and relaxed too much.

This is true, that the wiſdom of all theſe latter times in princes affairs, is rather fine deliveries, and ſhiftings of dangers and miſchiefs, when they are near; than ſolid and grounded courſes to keep them aloof. But this is but to try maſteries with fortune: and let men beware, how they neglect, and ſuffer matter of trouble to be prepared; for no man can forbid the ſpark, nor tell whence it may come. The difficulties in princes buſineſs, are many and great; but the greateſt difficulty, is often in their own mind. For it is common with princes (ſaith *Tacitus*) to will contradictories. *Sunt plerumque regum voluntates vehementes, & inter ſe contrariae.* For it is the ſoleciſm of power, to think to command the end, and yet not to endure the means.

Kings

KINGS have to deal with their neighbours, their wives, their children; their prelates or clergy, their nobles, their ſecond nobles or gentlemen; their merchants; their commons, and their men of war; and from all theſe ariſe dangers, if care and circumſpection be not uſed.

FIRST for their neighbours, there can no general rule be given (the occaſions are ſo variable,) ſave one, which ever holdeth; which is, that princes do keep due centinel, that none of their neighbours do overgrow ſo, (by encreaſe of territory, by embracing of trade, by approaches, or the like) as they become more able to annoy them, than they were, and this is generally the work of ſtanding counſels, to foreſee, and to hinder it. During that triumvirate of kings, king *Henry* the eighth of *England*, *Francis* the firſt, king of *France*, and *Charles* the fifth emperor, there was ſuch a watch kept, that none of the three could win a palm of ground, but the other two would ſtraightways balance it, either by confederation, or if need were by a war: and would not, in any wiſe, take up peace at intereſt. And the like was done by that league (which, *Guicciardine* ſaith, was the ſecurity of *Italy*) made between *Ferdinando* king of *Naples*; *Lorenzius Medices*, and *Ludovicus Sforſa*, potentates, the one of *Florence*, the other of *Milan*. Neither is the opinion of ſome of the ſchool-men to be received, that a war cannot juſtly be made, but upon a precedent injury, or provocation. For there is no queſtion; but a juſt fear of an imminent danger, though there be no blow given, is a lawful cauſe of a war.

FOR their wives, there are cruel examples of them. *Livia* is infamed for the poiſoning of her huſband: *Roxolana*, *Solyman*'s wife, was the deſtruction of that renowned prince, *Sultan Muſtapha*; and otherwiſe troubled his houſe and ſucceſſion: *Edward* the ſecond of *England*, his queen, had the principal hand in the depoſing and murther of her huſband. This kind of danger is then to be feared, chiefly, when the wives have plots, for the raiſing of their own children; or elſe that they be advoutreſſes.

FOR their children: the tragedies, likewiſe of the dangers for them, have been many: and generally, the entring of the fathers into ſuſpicion of their children, hath been ever unfortunate. The deſtruction of *Muſtapha*, (that we named before) was ſo fatal to *Solyman*'s line, as the ſucceſſion of the *Turks* from *Solyman*, until this day, is ſuſpected to be untrue, and of ſtrange blood; for that *Selymus* the ſecond was thought to be ſuppoſititious. The deſtruction of *Criſpus*, a young prince of rare towardneſs, by *Conſtantinus* the great, his father, was in like manner fatal to his houſe, for both *Conſtantinus* and *Conſtance*, his ſons, died violent deaths; and *Conſtantius* his other ſon did little better; who died indeed of ſickneſs, but after that *Julianus* had taken arms againſt him. The deſtruction of *Demetrius*, ſon to *Philip* the ſecond of *Macedon*, turned upon the father, who died of repentance. And many like examples there are; but few or none where the fathers had good by ſuch diſtruſt, except it were where the ſons were up in open arms againſt them; as was *Selymus* the firſt againſt *Bajazet*: and the three ſons of *Henry* the ſecond king of *England*.

FOR their prelates, when they are proud and great, there is alſo danger from them: as it was in the times of *Anſelmus* and *Thomas Becket*, archbiſhops of *Canterbury*, who with their croſiers did almoſt try it with the king's ſword; and yet they had to deal with ſtout and haughty kings, *William Rufus*, *Henry* the firſt, and *Henry* the ſecond. The danger is not from that

that ſtate, but where it hath a dependence of foreign authority; or where the churchmen come in, and are elected, not by the collation of the king, or particular patrons, but by the people.

For their nobles; to keep them at a diſtance it is not amiſs; but to depreſs them, may make a king more abſolute, but leſs ſafe; and leſs able to perform any thing that he deſires. I have noted it in my hiſtory of king *Henry* the ſeventh of *England*, who depreſſed his nobility; whereupon it came to paſs that his times were full of difficulties and troubles: for the nobility, though they continued loyal unto him, yet did they not co-operate with him in his buſineſs. So that in effect he was fain to do all things himſelf.

For their ſecond nobles; there is not much danger from them, being a body diſperſed. They may ſometimes diſcourſe high, but that doth little hurt: beſides, they are a counterpoize to the higher nobility, that they grow not too potent: and laſtly, being the moſt immediate in authority with the common people, they do beſt temper popular commotions.

For their merchants, they are *vena porta*; and if they flouriſh not, a kingdom may have good limbs, but will have empty veins, and nouriſh little. Taxes and impoſts upon them, do ſeldom good to the king's revenue, for that that he wins in the hundred, he loſeth in the ſhire; the particular rates being increaſed, but the total bulk of trading rather decreaſed.

For their commons, there is little danger from them, except it be where they have great and potent heads; or where you meddle with the point of religion, or their cuſtoms or means of life.

For their men of war, it is a dangerous ſtate where they live and remain in a body, and are uſed to donatives, whereof we ſee examples in the janizaries and pretorian bands of *Rome*; but trainings of men, and arming them in ſeveral places, and under ſeveral commanders, and without donatives, are things of defence and no danger.

Princes are like to heavenly bodies, which cauſe good or evil times; and which have much veneration, but no reſt. All precepts concerning kings are in effect comprehended in thoſe two remembrances: *memento quod es homo*; and *memento quod es Deus*, or *vice Dei*: the one bridleth their power, and the other their will.

## XXI. *Of counſel.*

The greateſt truſt between man and man, is the truſt of giving counſel. For in other confidences, men commit the parts of life; their lands, their goods, their children, their credit, ſome particular affair; but to ſuch as they make their counſellors, they commit the whole: by how much the more they are obliged to all faith and integrity. The wiſeſt princes need not think it any diminution to their greatneſs, or derogation to their ſufficiency, to rely upon counſel. God himſelf is not without: but hath made it one of the great names of his bleſſed ſon, *the counſellor*. *Solomon* hath pronounced, that *in counſel is ſtability*. Things will have their firſt or ſecond agitation; if they be not toſſed upon the arguments of counſel, they will be toſſed upon the waves of fortune; and be full of inconſtancy, doing and undoing, like the reeling of a drunken man. *Solomon*'s ſon found the force of counſel, as his father ſaw the neceſſity of it. For the beloved kingdom of God was firſt rent and broken by ill counſel; upon which counſel there are ſet for our inſtruction, the two marks, whereby bad counſel is

for ever beſt diſcerned: that it was young counſel for the perſons, and violent counſel for the matter.

THE ancient times do ſet forth in figure, both the incorporation and inſeparable conjunction of counſel with kings; and the wiſe and politick uſe of counſel by kings: the one, in that they ſay *Jupiter* did marry *Metis*, which ſignifieth counſel; whereby they intend, that ſovereignty is married to counſel: the other in that which followeth, which was thus: they ſay, after *Jupiter* was married to *Metis*, ſhe conceived by him, and was with child, but *Jupiter* ſuffered her not to ſtay till ſhe brought forth, but eat her up; whereby he became himſelf with child, and was delivered of *Pallas* armed out of his head. Which monſtrous fable containeth a ſecret of empire; how kings are to make uſe of their council of ſtate: that firſt, they ought to refer matters unto them, which is the firſt begetting or impregnation; but when they are elaborate, moulded, and ſhaped in the womb of their counſel, and grow ripe and ready to be brought forth; that then they ſuffer not their counſel to go through with the reſolution and direction, as if it depended on them; but take the matter back into their own hands, and make it appear to the world, that the decrees and final directions (which becauſe they come forth with prudence and power, are reſembled to *Pallas* armed) proceeded from themſelves: and not only from their authority, but (the more to add reputation to themſelves) from their head and device.

LET us now ſpeak of the inconveniences of counſel, and of the remedies. The inconveniences that have been noted in calling and uſing counſel, are three. Firſt, the revealing of affairs, whereby they become leſs ſecret. Secondly, the weakning of the authority of princes, as if they were leſs of themſelves. Thirdly, the danger of being unfaithfully counſelled, and more for the good of them that counſel, than of him that is counſelled. For which inconveniencies, the doctrine of *Italy*, and practice of *France*, in ſome kings times, hath introduced cabinet counſels; a remedy worſe than the diſeaſe.

As to ſecrecy, princes are not bound to communicate all matters with all counſellors, but may extract and ſelect. Neither is it neceſſary, that he that conſulteth what he ſhould do, ſhould declare what he will do. But let princes beware, that the unſecreting of their affairs comes not from themſelves. And as for cabinet counſels, it may be their motto; *plenus rimarum ſum:* one futile perſon, that maketh it his glory to tell, will do more hurt, than many that know it their duty to conceal. It is true, there be ſome affairs which require extreme ſecrecy, which will hardly go beyond one or two perſons beſides the king: neither are thoſe counſels unproſperous; for beſides the ſecrecy, they commonly go on conſtantly in one ſpirit of direction without diſtraction. But then it muſt be a prudent king, ſuch as is able to grind with a hand-mill; and thoſe inward counſellors had need alſo be wiſe men, and eſpecially true and truſty to the king's ends; as it was with king *Henry* the ſeventh of *England*, who in his greateſt buſineſs imparted himſelf to none, except it were to *Morton* and *Fox*.

FOR weakning of authority; the fable ſheweth the remedy. Nay, the majeſty of kings is rather exalted than diminiſhed, when they are in the chair of counſel; neither was there ever prince bereaved of his dependences by his counſel, except where there hath been either an over-greatneſs in one counſellor, or an over-ſtrict combination in divers; which are things ſoon found and holpen.

FOR

For the laſt inconvenience, that men will counſel with an eye to themſelves; certainly, *non inveniet fidem ſuper terram*, is meant of the nature of times, and not of all particular perſons. There be, that are in nature, faithful and ſincere, and plain and direct; not crafty and involved: let princes, above all draw to themſelves ſuch natures. Beſides, counſellors are not commonly ſo united, but that one counſellor keepeth centinel over another; ſo that if any do counſel out of faction or private ends, it commonly comes to the king's ear. But the beſt remedy is, if princes know their counſellors, as well as their counſellors know them:

*Principis eſt virtus maxima noſſe ſuos.*

And on the other ſide, counſellors ſhould not be too ſpeculative into their ſovereign's perſon. The true compoſition of a counſellor, is rather to be ſkilful in their maſter's buſineſs, than in his nature; for then he is like to adviſe him, and not to feed his humour. It is of ſingular uſe to princes, if they take the opinions of their counſel both ſeparately and together: for private opinion is more free, but opinion before others is more reverend. In private, men are more bold in their own humours; and in conſort, men are more obnoxious to others humours; therefore it is good to take both: and of the inferior ſort, rather in private, to preſerve freedom; of the greater rather in conſort, to preſerve reſpect. It is in vain for princes to take counſel concerning matters, if they take no counſel likewiſe concerning perſons: for all matters are as dead images; and the life of the execution of affairs, reſteth in the good choice of perſons. Neither is it enough to conſult concerning perſons, *ſecundum genera*, as in an idea or mathematical deſcription, what the kind and character of the perſon ſhould be; for the greateſt errors are committed, and the moſt judgment is ſhewn, in the choice of individuals. It was truly ſaid, *optimi conſiliarii mortui*; books will ſpeak plain, when counſellors blanch. Therefore it is good to be converſant in them, ſpecially the books of ſuch as themſelves have been actors upon the ſtage.

The counſels at this day, in moſt places, are but familiar meetings; where matters are rather talked on, than debated: and they run too ſwift to the order or act of counſel. It were better, that in cauſes of weight, the matter were propounded one day, and not ſpoken to till the next day; *in nocte conſilium*. So was it done in the commiſſion of union, between *England* and *Scotland*; which was a grave and orderly aſſembly. I commend ſet days for petitions: for both it gives the ſuitors more certainty for their attendance; and it frees the meetings for matters of eſtate, that they may *hoc agere*. In choice of committees, for ripening buſineſs for the counſel, it is better to chuſe indifferent perſons, than to make an indifferency, by putting in thoſe that are ſtrong on both ſides. I commend alſo ſtanding commiſſions; as for trade, for treaſure, for war, for ſuits, for ſome provinces: for where there be divers particular counſels, and but one counſel of eſtate, (as it is in *Spain*) they are, in effect, no more than ſtanding commiſſions; ſave that they have greater authority. Let ſuch as are to inform counſels out of their particular profeſſions, (as lawyers, ſea-men, mint-men, and the like) be firſt heard before committees; and then, as occaſion ſerves, before the counſel. And let them not come in multitudes, or in a tribunitious manner; for that is, to clamour counſels not to inform them. A long table and a ſquare table, or ſeats about the walls, ſeem things of form, but are things of ſubſtance; for at a long

table, a few at the upper end, in effect, ſway all the buſineſs; but in the other form, there is more uſe of the counſellors opinions, that ſit lower. A king when he preſides in council, let him beware how he opens his own inclination too much, in that which he propoundeth: for elſe counſellors will but take the wind of him; and inſtead of giving free counſel, ſing him a ſong of *placebo*.

## XXII. *Of delays.*

Fortune is like the market, where many times if you can ſtay a little, the price will fall. And again, it is ſometimes like *Sibylla*'s offer, which at firſt offereth the commodity at full, then conſumeth part and part, and ſtill holdeth up the price. For occaſion (as it is in the common verſe) turneth a bald noddle, after ſhe hath preſented her locks in front, and no hold taken: or at leaſt turneth the handle of the bottle firſt to be received, and after the belly, which is hard to claſp. There is ſurely no greater wiſdom, than well to time the beginnings and onſets of things. Dangers are no more light, if they once ſeem light: and more dangers have deceived men, than forced them. Nay, it were better to meet ſome dangers half way, though they come nothing near, than to keep too long a watch upon their approaches; for if a man watch too long, it is odds he will fall aſleep. On the other ſide, to be deceived with too long ſhadows, (as ſome have been when the moon was low, and ſhone on their enemies back) and ſo to ſhoot off before the time; or to teach dangers to come on, by over-early buckling towards them, is another extreme. The ripeneſs or unripeneſs of the occaſion, (as we ſaid) muſt ever be well weighed; and generally it is good to commit the beginnings of all great actions, to *Argos* with his hundred eyes; and the ends to *Briareus* with his hundred hands: firſt to watch, and then to ſpeed. For the helmet of *Pluto*, which maketh the politick man go inviſible, is ſecrecy in the counſel, and celerity in the execution. For when things are once come to the execution, there is no ſecrecy comparable to celerity; like the motion of a bullet in the air, which flieth ſo ſwift as it outruns the eye.

## XXIII. *Of cunning.*

We take cunning for a ſiniſter or crooked wiſdom. And certainly there is great difference between a cunning man, and a wiſe man; not only in point of honeſty, but in point of ability. There be that can pack the cards, and yet cannot play well; ſo there are ſome that are good in canvaſſes and factions, that are otherwiſe weak men. Again, it is one thing to underſtand perſons, and another thing to underſtand matters; for many are perfect in mens humours, that are not greatly capable of the real part of buſineſs; which is the conſtitution of one that hath ſtudied men more than books. Such men are fitter for practice than for counſel; and they are good but in their own ally: turn them to new men, and they have loſt their aim; ſo as the old rule, to know a fool from a wiſe man, *Mitte ambos nudos ad ignotos, & videbis*, doth ſcarce hold for them. And becauſe theſe cunning men are like haberdaſhers of ſmall wares, it is not amiſs to ſet forth their ſhop.

It is a point of cunning, to wait upon him with whom you ſpeak with your eye; as the Jeſuits give it in precept: for there be many wiſe men that have ſecret hearts and tranſparent countenances. Yet this would be done

done with a demure abaſing of your eye ſometimes, as the Jeſuits alſo do uſe.

ANOTHER is, that when you have any thing to obtain of preſent diſpatch, you entertain and amuſe the party with whom you deal with ſome other diſcourſe; that he be not too much awake to make objections. I knew a counſellor and ſecretary, that never came to queen *Elizabeth* of *England* with bills to ſign, but he would always firſt put her into ſome diſcourſe of eſtate, that ſhe might the leſs mind the bills.

THE like ſurprize may be made by moving things, when the party is in haſte, and cannot ſtay, to conſider adviſedly of that is moved.

IF a man would croſs a buſineſs, that he doubts ſome other would handſomely and effectually move, let him pretend to wiſh it well, and move it himſelf in ſuch ſort as may foil it.

THE breaking off in the midſt of that one was about to ſay, as if he took himſelf up, breeds a greater appetite in him with whom you confer, to know more.

AND becauſe it works better when any thing ſeemeth to be gotten from you by queſtion, than if you offer it of your ſelf, you may lay a bait for a queſtion, by ſhewing another viſage and countenance than you are wont; to the end, to give occaſion for the party to aſk what the matter is of the change; as *Nehemiah* did, *and I had not before that time been ſad before the king.*

IN things that are tender and unpleaſing, it is good to break the ice by ſome whoſe words are of leſs weight, and to reſerve the more weighty voice to come in as by chance, ſo that he may be aſked the queſtion upon the other's ſpeech: As *Narciſſus* did, in relating to *Claudius* the marriage of *Meſſalina* and *Silius*.

IN things that a man would not be ſeen in himſelf, it is a point of cunning to borrow the name of the world; as to ſay, the world ſays, or, there is a ſpeech abroad.

I knew one, that when he wrote a letter, he would put that which was moſt material in the poſtſcript, as if it had been a by-matter.

I knew another, that when he came to have ſpeech, he would paſs over that that he intended moſt; and go forth, and come back again, and ſpeak of it as of a thing that he had almoſt forgot.

SOME procure themſelves to be ſurprized, at ſuch times as it is like the party that they work upon, will ſuddenly come upon them: and to be found with a letter in their hand, or doing ſomewhat which they are not accuſtomed; to the end they may be appoſed of thoſe things, which of themſelves they are deſirous to utter.

IT is a point of cunning, to let fall thoſe words in a man's own name, which he would have another man learn and uſe, and thereupon take advantage. I knew two that were competitors for the ſecretary's place in queen *Elizabeth*'s time, and yet kept good quarter between themſelves, and would confer one with another upon the buſineſs; and the one of them ſaid, that to be a ſecretary in the declination of a monarchy, was a tickliſh thing, and that he did not affect it: the other ſtrait caught up thoſe words, and diſcourſed with divers of his friends, that he had no reaſon to deſire to be ſecretary in the declination of a monarchy. The firſt man took hold of it, and found means it was told the queen; who hearing of a declination of a monarchy, took it ſo ill, as ſhe would never after hear of the other's ſuit.

THERE

THERE is a cunning which we in *England* call, the turning of the cat in the pan; which is, when that which a man ſays to another, he lays it as if another had ſaid it to him; and to ſay truth, it is not eaſy when ſuch a matter paſſed between two, to make it appear from which of them it firſt moved and began.

IT is a way that ſome men have, to glance and dart at others, by juſtifying themſelves by negatives; as to ſay, this I do not: as *Tigellinus* did towards *Burrhus*, *ſe non diverſas ſpes, ſed incolumitatem imperatoris ſimpliciter ſpectare.*

SOME have in readineſs ſo many tales and ſtories, as there is nothing they would inſinuate, but they can wrap it into a tale; which ſerveth both to keep themſelves more in guard, and to make others carry it with more pleaſure.

IT is a good point of cunning, for a man to ſhape the anſwer he would have in his own words and propoſitions; for it makes the other party ſtick the leſs.

IT is ſtrange how long ſome men will lie in wait to ſpeak ſomewhat they deſire to ſay; and how far about they will fetch, and how many other matters they will beat over to come near it; it is a thing of great patience, but yet of much uſe.

A ſudden, bold, and unexpected queſtion, doth many times ſurprize a man, and lay him open. Like to him, that having changed his name, and walking in *Paul*'s, another ſuddenly came behind him and called him by his true name, whereat ſtraightways he looked back.

BUT theſe ſmall wares and petty points of cunning are infinite, and it were a good deed to make a liſt of them; for that nothing doth more hurt in a ſtate, than that cunning men paſs for wiſe.

BUT certainly ſome there are that know the reſorts and falls of buſineſs, that cannot ſink into the main of it; like a houſe that hath convenient ſtairs and entries, but never a fair room. Therefore you ſhall ſee them find out pretty looſes in the concluſion, but are no ways able to examine or debate matters. And yet commonly they take advantage of their inability, and would be thought wits of direction. Some build rather upon the abuſing of others, and (as we now ſay) putting tricks upon them, than upon ſoundneſs of their own proceedings. But *Solomon* ſaith, *Prudens advertit ad greſſus ſuos: ſtultus divertit ad dolos.*

## XXIV. *Of wiſdom for a man's ſelf.*

AN ant is a wiſe creature for itſelf: but it is a ſhrewd thing in an orchard or garden. And certainly men that are great lovers of themſelves waſte the publick. Divide with reaſon between ſelf-love and ſociety; and be ſo true to thy ſelf, as thou be not falſe to others; eſpecially to thy king and country. It is a poor center of a man's actions, himſelf. It is right earth. For that only ſtands faſt upon his own center; whereas all things that have affinity with the heavens, move upon the center of another which they benefit. The referring of all to a man's ſelf, is more tolerable in a ſovereign prince, becauſe themſelves are not only themſelves, but their good and evil is at the peril of the publick fortune. But it is a deſperate evil in a ſervant to a prince, or a citizen in a republick. For whatſoever affairs paſs ſuch a man's hands, he crooketh them to his own ends: which muſt needs be often eccentrick to the ends of his maſter or ſtate. Therefore let princes or ſtates chuſe ſuch ſervants as have not this mark; except they mean their ſervice

ſhould be made but the acceſſary. That which maketh the effect more pernicious is, that all proportion is loſt: it were diſproportion enough for the ſervant's good, to be preferred before the maſter's; but yet it is a greater extreme, when a little good of the ſervant, ſhall carry things againſt a great good of the maſter's. And yet that is the caſe of bad officers, treaſurers, embaſſadors, generals, and other falſe and corrupt ſervants; which ſet a biaſs upon their bowl of their own petty ends and envies, to the overthrow of their maſters great and important affairs. And for the moſt part, the good ſuch ſervants receive, is after the model of their own fortune; but the hurt they ſell for that good, is after the model of their maſters fortune. And certainly it is the nature of extreme ſelf-lovers, as they will ſet an houſe on fire, and it were but to roaſt their eggs: and yet theſe men many times hold credit with their maſters, becauſe their ſtudy is but to pleaſe them, and profit themſelves: and for either reſpect they will abandon the good of their affairs.

Wisdom for a man's ſelf, is in many branches thereof a depraved thing. It is the wiſdom of rats, that will be ſure to leave a houſe ſomewhat before it fall. It is the wiſdom of the fox, that thruſts out the badger, who digged and made room for him. It is the wiſdom of crocodiles, that ſhed tears when they would devour. But that which is ſpecially to be noted is, that thoſe which (as *Cicero* ſays of *Pompey*) are, *ſui amantes ſine rivali*, are many times unfortunate. And whereas they have all their time ſacrificed to themſelves, they become in the end themſelves ſacrifices to the inconſtancy of fortune, whoſe wings they thought by their ſelf-wiſdom to have pinioned.

## XXV. *Of innovations.*

As the births of living creatures at firſt are ill ſhapen; ſo are all innovations which are the births of time. Yet notwithſtanding as thoſe that firſt bring honour into their family, are commonly more worthy than moſt that ſucceed: ſo the firſt precedent (if it be good) is ſeldom attained by imitation. For ill, to man's nature, as it ſtands perverted, hath a natural motion ſtrongeſt in continuance: but good, as a forced motion, ſtrongeſt at firſt. Surely every medicine is an innovation, and he that will not apply new remedies, muſt expect new evils; for time is the greateſt innovator: and if time of courſe alter things to the worſe, and wiſdom and counſel ſhall not alter them to the better, what ſhall be the end? It is true, that what is ſettled by cuſtom, though it be not good, yet at leaſt it is fit. And thoſe things which have long gone together, are, as it were, confederate within themſelves: whereas new things piece not ſo well; but though they help by their utility, yet they trouble by their inconformity. Beſides, they are like ſtrangers, more admired, and leſs favoured. All this is true if time ſtood ſtill; which contrariwiſe moveth ſo round, that a froward retention of cuſtom is as turbulent a thing, as an innovation; and they that reverence too much old times are but a ſcorn to the new. It were good therefore, that men in their innovations would follow the example of time itſelf, which indeed innovateth greatly, but quietly and by degrees ſcarce to be perceived: for otherwiſe whatſoever is new is unlooked for; and ever it mends ſome, and pairs other: and he that is holpen takes it for a fortune, and thanks the time; and he that is hurt, for a wrong, and imputeth it to the author. It is good alſo not to try experiments in ſtates, except the neceſſity be urgent, or the utility evident; and well to beware that it be the reformation that draweth

on

on the change; and not the desire of change that pretendeth the reformation. And lastly, that the novelty, though it be not rejected, yet be held for a suspect: and as the scripture saith, *That we make a stand upon the ancient way, and then look about us, and discover what is the strait and right way, and so to walk in it.*

## XXVI. *Of dispatch.*

Affected dispatch is one of the most dangerous things to business that can be. It is like that which the physicians call predigestion, or hasty digestion; which is sure to fill the body full of crudities, and secret seeds of diseases. Therefore measure not dispatch by the times of sitting, but by the advancement of the business. And as in races, it is not the large stride, or high lift, that makes the speed; so in business, the keeping close to the matter, and not taking of it too much at once, procureth dispatch. It is the care of some, only to come off speedily for the time; or to contrive some false periods of business, because they may seem men of dispatch. But it is one thing to abbreviate by contracting, another by cutting off; and business so handled at several sittings or meetings, goeth commonly backward and forward in an unsteddy manner. I knew a wise man that had it for a by-word, when he saw men hasten to a conclusion, stay a little, that we may make an end the sooner.

On the other side, true dispatch is a rich thing. For time is the measure of business, as money is of wares: and business is bought at a dear hand, where there is small dispatch. The *Spartans* and *Spaniards* have been noted to be of small dispatch: *Mi venga la muerte de Spagna*; let my death come from *Spain*; for then it will be sure to be long in coming.

Give good hearing to those that give the first information in business; and rather direct them in the beginning, than interrupt them in the continuance of their speeches: for he that is put out of his own order, will go forward and backward, and be more tedious while he waits upon his memory, than he could have been if he had gone on in his own course. But sometimes it is seen, that the moderator is more troublesome than the actor.

Iterations are commonly loss of time: but there is no such gain of time, as to iterate often the state of the question; for it chaseth away many a frivolous speech as it is coming forth. Long and curious speeches are as fit for dispatch, as a robe or mantle with a long train is for race. Prefaces, and passages, and excusations, and other speeches of reference to the person, are great wastes of time; and though they seem to proceed of modesty, they are bravery. Yet beware of being too material, when there is any impediment or obstruction in mens wills; for preoccupation of mind ever requireth preface of speech; like a fomentation to make the unguent enter.

Above all things, order, and distribution, and singling out of parts, is the life of dispatch; so as the distribution be not too subtile: for he that doth not divide, will never enter well into business; and he that divideth too much, will never come out of it clearly. To chuse time, is to save time; and an unseasonable motion is but beating the air. There be three parts of business; the preparation, the debate or examination, and the perfection. Whereof, if you look for dispatch, let the middle only be the work of many, and the first and last the work of few. The proceeding upon somewhat conceived in writing, doth for the most part facilitate dispatch: for

for though it ſhould be wholly rejected, yet that negative is more pregnant of direction, than an indefinite; as aſhes are more generative than duſt.

## XXVII. *Of ſeeming wiſe.*

It hath been an opinion, that the *French* are wiſer than they ſeem; and the *Spaniards* ſeem wiſer than they are. But howſoever it be between nations, certainly it is ſo between man and man. For as the Apoſtle ſaith of godlineſs, *having a ſhew of godlineſs, but denying the power thereof*; ſo certainly there are in points of wiſdom and ſufficiency, that do nothing or little very ſolemnly; *magno conatu nugas.* It is a ridiculous thing, and fit for a ſatyr to perſons of judgment, to ſee what ſhifts theſe formaliſts have, and what proſpectives to make ſuperficies to ſeem body that hath depth and bulk. Some are ſo cloſe and reſerved, as they will not ſhew their wares but by a dark light; and ſeem always to keep back ſomewhat; and when they know within themſelves, they ſpeak of that they do not well know, would nevertheleſs ſeem to others, to know of that which they may not well ſpeak. Some help themſelves with countenance and geſture, and are wiſe by ſigns; as *Cicero* ſaith of *Piſo*, that when he anſwered him, he fetched one of his brows up to his forehead, and bent the other down to his chin: *reſpondes, altero ad frontem ſublato, altero ad mentum depreſſo ſupercilio, crudelitatem tibi non placere.* Some think to bear it by ſpeaking a great word, and being peremptory; and go on, and take by admittance that which they cannot make good. Some, whatſoever is beyond their reach, will ſeem to deſpiſe or make light of it as impertinent or curious; and ſo would have their ignorance ſeem judgment. Some are never without a difference, and commonly by amuſing men with a ſubtilty, blanch the matter; of whom *A. Gellius* ſaith, *hominem delirum, qui verborum minutiis rerum frangit pondera.* Of which kind alſo, *Plato* in his *Protagoras* bringeth in *Prodicus* in ſcorn; and maketh him make a ſpeech that conſiſteth of diſtinctions from the beginning to the end. Generally ſuch men in all deliberations find eaſe to be of the negative ſide, and affect a credit to object and foretel difficulties: for when propoſitions are denied, there is an end of them; but if they be allowed, it requireth a new work: which falſe point of wiſdom is the bane of buſineſs. To conclude, there is no decaying merchant, or inward beggar, hath ſo many tricks to uphold the credit of their wealth, as theſe empty perſons have to maintain the credit of their ſufficiency. Seeming wiſe men may make ſhift to get opinion; but let no man chuſe them for employment, for certainly you were better take for buſineſs a man ſomewhat abſurd, than over-formal.

## XXVIII. *Of friendſhip.*

It had been hard for him that ſpake it, to have put more truth and untruth together, in few words, than in that ſpeech; whoſoever is delighted in ſolitude, is either a wild beaſt, or a god. For it is moſt true, that a natural and ſecret hatred, and averſation towards ſociety, in any man, hath ſomewhat of the ſavage beaſt: but it is moſt untrue, that it ſhould have any character at all of the divine nature, except it proceed, not out of a pleaſure in ſolitude, but out of a love and deſire to ſequeſter a man's ſelf for a higher converſation: ſuch as is found to have been falſely and feignedly, in ſome of the heathen; as *Epimenides* the *Candian*, *Numa* the *Roman*, *Empedocles* the *Sicilian*, and *Apollonius* of *Tyana*; and truly and really, in divers of the ancient hermits, and holy fathers of the church. But little do men

perceive what ſolitude is, and how far it extendeth. For a croud is not company, and faces are but a gallery of pictures; and talk but a tinkling cymbal, where there is no love. The *Latin* adage meeteth with it a little; *magna civitas, magna ſolitudo*; becauſe in a great town friends are ſcattered, ſo that there is not that fellowſhip, for the moſt part, which is in leſs neighbourhoods. But we may go farther, and affirm moſt truly, that it is a mere and miſerable ſolitude, to want true friends, without which the world is but a wilderneſs. And even in this ſenſe alſo of ſolitude, whoſoever in the frame of his nature and affections is unfit for friendſhip, he taketh it of the beaſt, and not from humanity.

A principal fruit of friendſhip, is the eaſe and diſcharge of the fulneſs of the heart, which paſſions of all kinds do cauſe and induce. We know diſeaſes of ſtoppings and ſuffocations, are the moſt dangerous in the body; and it is not much otherwiſe in the mind; you may take ſarza to open the liver; ſteel to open the ſpleen; flower of ſulphur for the lungs; *caſtoreum* for the brain; but no receipt openeth the heart but a true friend, to whom you may impart griefs, joys, fears, hopes, ſuſpicions, counſels, and whatſoever lieth upon the heart, to oppreſs it, in a kind of civil ſhift or confeſſion.

It is a ſtrange thing to obſerve, how high a rate great kings and monarchs do ſet upon this fruit of friendſhip, whereof we ſpeak; ſo great, as they purchaſe it many times at the hazard of their own ſafety and greatneſs. For princes, in regard of the diſtance of their fortune, from that of their ſubjects and ſervants, cannot gather this fruit, except (to make themſelves capable thereof) they raiſe ſome perſons to be as it were companions, and almoſt equals to themſelves; which many times ſorteth to inconvenience. The modern languages give unto ſuch perſons the name of favourites, or privadoes; as if it were matter of grace or converſation: but the *Roman* name attaineth the true uſe and cauſe thereof; naming them *participes curarum*; for it is that which tieth the knot. And we ſee plainly, that this hath been done, not by weak and paſſionate princes only, but by the wiſeſt and moſt politick that ever reigned, who have oftentimes joined to themſelves ſome of their ſervants, whom both themſelves have called friends, and allowed others likewiſe to call them in the ſame manner, uſing the word which is received between private men.

*L. Sylla*, when he commanded *Rome*, raiſed *Pompey* (after ſurnamed the great) to that height, that *Pompey* vaunted himſelf for *Sylla*'s over-match. For when he had carried the conſulſhip for a friend of his, againſt the purſuit of *Sylla*, and that *Sylla* did a little reſent thereat, and began to ſpeak great, *Pompey* turned upon him again, and in effect bad him be quiet; for that more men adored the ſun riſing, than the ſun ſetting. With *Julius Caeſar*, *Decimus Brutus* had obtained that intereſt, as he ſet him down in his teſtament, for heir in remainder after his nephew. And this was the man that had power with him, to draw him forth to his death. For when *Caeſar* would have diſcharged the ſenate, in regard of ſome ill preſages, and ſpecially a dream of *Calpurnia*; this man lifted him gently by the arm out of his chair, telling him, he hoped he would not diſmiſs the ſenate, till his wife had dream'd a better dream. And it ſeemeth, his favour was ſo great, as *Antonius* in a letter, which is recited *verbatim*, in one of *Cicero*'s Philippicks, called him *veneſica*, witch; as if he had enchanted *Caeſar*. *Auguſtus* raiſed *Agrippa* (though of mean birth) to that height, as when he conſulted with *Mecaenas* about the marriage of his daughter *Julia*, *Mecaenas* took

took the liberty to tell him, that he must either marry his daughter to *Agrippa*, or take away his life; there was no third way, he had made him so great. With *Tiberius Caesar*, *Sejanus* had ascended to that height, as they two were termed and reckoned, as a pair of friends. *Tiberius* in a letter to him saith; *haec pro amicitia nostra non occultavi:* And the whole senate dedicated an altar to friendship, as to a goddess, in respect of the great dearness of friendship between them two. The like or more was between *Septimius Severus* and *Plautianus*. For he forced his eldest son to marry the daughter of *Plautianus*; and would often maintain *Plautianus*, in doing affronts to his son; and did write also in a letter to the senate, by these words; I love the man so well, as I wish he may over-live me. Now if these princes had been as a *Trajan*, or a *Marcus Aurelius*, a man might have thought that this had proceeded of an abundant goodness of nature; but being men so wise, of such strength and severity of mind, and so extreme lovers of themselves, as all these were; it proveth most plainly, that they found their own felicity (though as great as ever happened to mortal men) but as an half piece, except they might have a friend to make it entire; and yet, which is more, they were princes, that had wives, sons, nephews; and yet all these could not supply the comfort of friendship.

It is not to be forgotten what *Commineus* observeth, of his first master duke *Charles* the *Hardy*, namely, that he would communicate his secrets with none; and least of all, those secrets which troubled him most. Whereupon he goeth on, and saith, that towards his latter time, that closeness did impair, and a little perish his understanding. Surely *Commineus* might have made the same judgment also, if it had pleased him, of his second master *Lewis* the eleventh, whose closeness was indeed his tormenter. The parable of *Pythagoras* is dark, but true; *cor ne edito*, eat not the heart. Certainly, if a man would give it a hard phrase, those that want friends to open themselves unto, are cannibals of their own hearts. But one thing is most admirable, (wherewith I will conclude this first fruit of friendship) which is, that this communicating of a man's self to his friend, works two contrary effects; for it redoubleth joys, and cutteth griefs in halfs. For there is no man that imparteth his joys to his friend, but he joyeth the more; and no man that imparteth his griefs to his friend, but he grieveth the less. So that it is in truth of operation upon a man's mind, of like virtue, as the alchymists use to attribute to their stone, for man's body; that it worketh all contrary effects, but still to the good and benefit of nature. But yet, without praying in aid of alchymists, there is a manifest image of this in the ordinary course of nature. For in bodies, union strengtheneth and cherisheth any natural action; and, on the other side, weakeneth and dulleth any violent impression; and even so is it of minds.

The second fruit of friendship, is healthful and sovereign for the understanding, as the first is for the affections. For friendship maketh indeed a fair day in the affections, from storms and tempests; but it maketh daylight in the understanding, out of darkness and confusion of thoughts: neither is this to be understood only of faithful counsel, which a man receiveth from his friend; but before you come to that, certain it is, that whosoever hath his mind fraught with many thoughts, his wits and understanding do clarify and break up in the communicating and discoursing with another: he tosseth his thoughts more easily; he marshalleth them more orderly; he seeth how they look when they are turned into words; finally, he waxeth wiser than himself; and that more by an hour's discourse, than by a

day's meditation. It was well ſaid by *Themiſtocles* to the king of *Perſia*, that ſpeech was like cloth of *Arras*, opened and put abroad, whereby the imagery doth appear in figure; whereas in thoughts they lie but as in packs. Neither is this ſecond fruit of friendſhip, in opening the underſtanding, reſtrained only to ſuch friends, as are able to give a man council, (they indeed are beſt;) but even, without that, a man learneth of himſelf, and bringeth his own thoughts to light, and whetteth his wits as againſt a ſtone, which it ſelf cuts not. In a word; a man were better relate himſelf to a ſtatue, or picture, than to ſuffer his thoughts to paſs in ſmother.

Add now, to make this ſecond fruit of friendſhip compleat, that other point which lieth more open, and falleth within vulgar obſervation; which is faithful counſel from a friend. *Heraclitus* ſaith well in one of his *aenigma's*, dry light is ever the beſt. And certain it is, that the light that a man receiveth by counſel from another, is drier and purer, than that which cometh from his own underſtanding and judgment; which is ever infuſed and drenched in his affections and cuſtoms. So as there is as much difference between the counſel that a friend giveth, and that a man giveth himſelf, as there is between the counſel of a friend, and of a flatterer. For there is no ſuch flatterer as is a man's ſelf; and there is no ſuch remedy againſt flattery of a man's ſelf, as the liberty of a friend. Counſel is of two ſorts; the one concerning manners, the other concerning buſineſs. For the firſt, the beſt preſervative to keep the mind in health, is the faithful admonition of a friend. The calling of a man's ſelf to a ſtrict account, is a medicine ſometimes too piercing and corroſive. Reading good books of morality, is a little flat and dead. Obſerving our faults in others, is ſometimes improper for our caſe: But the beſt receipt (beſt, I ſay, to work, and beſt to take) is the admonition of a friend. It is a ſtrange thing to behold what groſs errors, and extreme abſurdities many (eſpecially of the greater ſort) do commit, for want of a friend to tell them of them; to the great damage both of their fame and fortune. For, as St. *James* ſaith, they are as men *that look ſometimes into a glaſs, and preſently forget their own ſhape and favour:* as for buſineſs, a man may think if he will, that two eyes ſee no more than one; or that a gameſter ſeeth always more than a looker on; or that a man in anger, is as wiſe as he that hath ſaid over the four and twenty letters; or that a muſket may be ſhot off, as well upon the arm, as upon a reſt; and ſuch other fond and high imaginations, to think himſelf all in all. But when all is done, the help of good counſel is that which ſetteth buſineſs ſtrait. And if any man think, that he will take counſel, but it ſhall be by pieces; aſking counſel in one buſineſs of one man, and in another buſineſs of another man; it is as well (that is to ſay, better perhaps than if he aſked none at all;) but he runneth two dangers: one, that he ſhall not be faithfully counſelled; for it is a rare thing, except it be from a perfect and entire friend, to have counſel given, but ſuch as ſhall be bowed and crooked to ſome ends which he hath that giveth it. The other, that he ſhall have counſel given, hurtful and unſafe, (though with good meaning) and mixt partly of miſchief, and partly of remedy: even as if you would call a phyſician that is thought good for the cure of the diſeaſe you complain of, but is unacquainted with your body; and therefore may put you in way for a preſent cure, but overthroweth your health in ſome other kind, and ſo cure the diſeaſe and kill the patient. But a friend that is wholly acquainted with a man's eſtate, will beware by furthering any preſent buſineſs, how he daſheth upon

upon other inconvenience. And therefore reſt not upon ſcattered counſels; they will rather diſtract and miſlead, than ſettle and direct.

After theſe two noble fruits of friendſhip, (peace in the affections, and ſupport of the judgment) followeth the laſt fruit, which is like the pomegranate, full of many kernels; I mean aid, and bearing a part in all actions and occaſions. Here the beſt way to repreſent to life the manifold uſe of friendſhip, is to caſt and ſee how many things there are which a man cannot do himſelf; and then it will appear that it was a ſparing ſpeech of the ancients to ſay, that a friend is another himſelf: for that a friend is far more than himſelf. Men have their time, and die many times in deſire of ſome things which they principally take to heart; the beſtowing of a child, the finiſhing of a work, or the like. If a man have a true friend, he may reſt almoſt ſecure, that the care of thoſe things will continue after him. So that a man hath as it were two lives in his deſires. A man hath a body, and that body is confined to a place; but where friendſhip is, all offices of life are as it were granted to him and his deputy: For he may exerciſe them by his friend. How many things are there, which a man cannot, with any face or comelineſs, ſay or do himſelf? A man can ſcarce alledge his own merits with modeſty, much leſs extol them: a man cannot ſometimes brook to ſupplicate or beg; and a number of the like. But all theſe things are graceful in a friend's mouth, which are bluſhing in a man's own. So again, a man's perſon hath many proper relations, which he cannot put off. A man cannot ſpeak to his ſon, but as a father; to his wife, but as a huſband; to his enemy, but upon terms: whereas a friend may ſpeak as the caſe requires, and not as it ſorteth with the perſon. But to enumerate theſe things were endleſs: I have given the rule, where a man cannot fitly play his own part; if he have not a friend, he may quit the ſtage.

## XXIX. *Of expence.*

Riches are for ſpending; and ſpending for honour and good actions. Therefore extraordinary expence muſt be limited by the worth of the occaſion: for voluntary undoing may be as well for a man's countrey, as for the kingdom of heaven. But ordinary expence ought to be limited by a man's eſtate, and governed with ſuch regard as it be within his compaſs; and not ſubject to deceit and abuſe of ſervants; and ordered to the beſt ſhew, that the bills may be leſs than the eſtimation abroad. Certainly if a man will keep but of even hand, his ordinary expences ought to be but to the half of his receipts. And if he think to wax rich, but to the third part. It is no baſeneſs for the greateſt, to deſcend and look into their own eſtate. Some forbear it, not upon negligence alone, but doubting to bring themſelves into melancholy, in reſpect they ſhall find it broken. But wounds cannot be cured without ſearching. He that cannot look into his own eſtate at all, had need both chuſe well thoſe whom he employeth, and change them often: for new are more timorous, and leſs ſubtile. He that can look into his eſtate but ſeldom, it behoveth him to turn all to certainties. A man had need, if he be plentiful in ſome kind of expence, to be as ſaving again in ſome other. As if he be plentiful in diet, to be ſaving in apparel: if he be plentiful in the hall, to be ſaving in the ſtable: and the like. For he that is plentiful in expences of all kinds, will hardly be preſerved from decay. In clearing of a man's eſtate, he may as well hurt himſelf in being in too ſudden, as in letting it run on too long: For haſty ſelling is commonly as diſadvantageable as intereſt. Beſides, he that clears at once will relapſe;

for finding himſelf out of ſtraits, he will revert to his cuſtoms: but he that cleareth by degrees induceth a habit of frugality, and gaineth as well upon his mind as upon his eſtate. Certainly, who hath a ſtate to repair, may not deſpiſe ſmall things: and commonly, it is leſs diſhonourable to abridge petty charge, than to ſtoop to petty gettings. A man ought warily to begin charges, which once begun will continue; but in matters that return not, he may be more magnificent.

## XXX. *Of the true greatneſs of kingdoms and eſtates.*

The ſpeech of *Themiſtocles* the *Athenian*, which was haughty and arrogant in taking ſo much to himſelf, had been a grave and wiſe obſervation and cenſure, applied at large to others. Deſiring at a feaſt to touch a lute, he ſaid, he could not fiddle, but yet he could make a ſmall town a great city. Theſe words (holpen a little with a metaphor) may expreſs two differing abilities, in thoſe that deal in buſineſs of eſtate. For if a true ſurvey be taken of counſellors and ſtateſmen, there may be found (though rarely) thoſe, which can make a ſmall ſtate great, and yet cannot fiddle: as on the other ſide, there will be found a great many that can fiddle very cunningly, but yet are ſo far from being able to make a ſmall ſtate great, as their gift lieth the other way; to bring a great and flouriſhing eſtate to ruin and decay. And certainly thoſe degenerate arts and ſhifts, whereby many counſellors and governours gain both favour with their maſters, and eſtimation with the vulgar, deſerve no better name than fiddling; being things rather pleaſing for the time, and graceful to themſelves only, than tending to the weal and advancement of the ſtate which they ſerve. There are alſo (no doubt) counſellors and governours which may be held ſufficient, *(negotiis pares)* able to manage affairs, and to keep them from precipices and manifeſt inconveniences; which nevertheleſs are far from the ability to raiſe and amplify an eſtate, in power, means, and fortune. But be the workmen what they may be, let us ſpeak of the work; that is, the true greatneſs of kingdoms and eſtates; and the means thereof. An argument fit for great and mighty princes to have in their hand; to the end, that neither by over-meaſuring their forces, they loſe themſelves in vain enterprizes; nor on the other ſide by under-valuing them, they deſcend to fearful and puſillanimous counſels.

The greatneſs of an eſtate in bulk and territory, doth fall under meaſure; and the greatneſs of finances and revenue doth fall under computation. The population may appear by muſters; and the number and greatneſs of cities and towns by cards and maps. But yet there is not any thing amongſt civil affairs more ſubject to error, than the right valuation and true judgment concerning the power and forces of an eſtate. The kingdom of heaven is compared, not to any great kernel or nut, but to a grain of muſtard-ſeed; which is one of the leaſt grains, but hath in it a property and ſpirit haſtily to get up and ſpread. So are there ſtates, great in territory, and yet not apt to enlarge or command; and ſome that have but a ſmall dimenſion of ſtem, and yet apt to be the foundation of great monarchies.

Walled towns, ſtored arſenals and armories, goodly races of horſe, chariots of war, elephants, ordnance, artillery, and the like: all this is but a ſheep in a lion's ſkin, except the breed and diſpoſition of the people be ſtout and warlike. Nay, number (it ſelf) in armies, importeth not much, where the people is of weak courage: for (as *Virgil* ſaith) it never troubles a

wolf how many the ſheep be. The army of the *Perſians*, in the plains of *Arbela*, was ſuch a vaſt ſea of people, as it did ſomewhat aſtoniſh the commanders in *Alexander*'s army; who came to him therefore, and wiſh'd him to ſet upon them by night; but he anſwered, he would not pilfer the victory: and the defeat was eaſy. When *Tigranes* the *Armenian*, being encamped upon a hill with four hundred thouſand men, diſcovered the army of the *Romans*, being not above fourteen thouſand marching towards him; he made himſelf merry with it, and ſaid, yonder men are too many for an ambaſſage, and too few for a fight. But before the ſun ſet, he found them enow to give him the chaſe, with infinite ſlaughter. Many are the examples of the great odds between number and courage: ſo that a man may truly make a judgment, that the principal point of greatneſs in any ſtate, is to have a race of military men. Neither is money the ſinews of war, (as it is trivially ſaid,) where the ſinews of mens arms, in baſe and effeminate people, are failing. For *Solon* ſaid well to *Croeſus*, (when in oſtentation he ſhewed him his gold,) Sir, if any other come that hath better iron than you, he will be maſter of all this gold. Therefore let any prince or ſtate think ſoberly of his forces, except his militia of natives be of good and valiant ſoldiers. And let princes, on the other ſide, that have ſubjects of martial diſpoſition, know their own ſtrength, unleſs they be otherwiſe wanting unto themſelves. As for mercenary forces, (which is the help in this caſe) all examples ſhew, that whatſoever eſtate or prince doth reſt upon them, he may ſpread his feathers for a time, but he will mew them ſoon after.

The bleſſing of *Judah* and *Iſſachar* will never meet; that the ſame people, or nation, ſhould be both the lion's whelp, and the aſs between burthens. Neither will it be, that a people over-laid with taxes ſhould ever become valiant and martial. It is true, that taxes levied by conſent of the eſtate, do abate mens courage leſs; as it hath been ſeen notably in the exerciſes of the *Low Countries*; and in ſome degree, in the ſubſidies of *England*. For you muſt note, that we ſpeak now of the heart, and not of the purſe. So that although the ſame tribute and tax, laid by conſent, or by impoſing, be all one to the purſe, yet it works diverſly upon the courage. So that you may conclude, that no people, over-charged with tribute, is fit for empire.

Let ſtates that aim at greatneſs, take heed how their nobility and gentlemen do multiply too faſt: for that maketh the common ſubject grow to be a peaſant, and baſe ſwain, driven out of heart, and in effect but a gentleman's labourer. Even as you may ſee in coppice woods; if you leave your ſtaddles too thick, you ſhall never have clean underwood, but ſhrubs and buſhes. So in countries, if the gentlemen be too many, the commons will be baſe; and you will bring it to that, that not the hundred poll will be fit for an helmet; eſpecially as to the infantry, which is the nerve of an army: and ſo there will be great population, and little ſtrength. This, which I ſpeak of, hath been no where better ſeen, than by comparing of *England* and *France*; whereof *England*, though far leſs in territory and population, hath been (nevertheleſs) an overmatch; in regard the middle people of *England* make good ſoldiers, which the peaſants of *France* do not. And herein the device of king *Henry* the ſeventh, (whereof I have ſpoken largely in the hiſtory of his life) was profound and admirable; in making farms, and houſes of huſbandry, of a ſtandard; that is, maintained with ſuch a proportion of land unto them, as may breed a ſubject to live in convenient plenty, and no ſervile condition; and to keep the plough in the hands of the

the owners, and not mere hirelings. And thus indeed you ſhall attain to *Virgil's* character, which he gives to ancient *Italy*:

—— *Terra potens armis atque ubere glebae.*

Neither is that ſtate (which for any thing I know, is almoſt peculiar to *England*, and hardly to be found any where elſe, except it be perhaps in *Poland*) to be paſſed over; I mean the ſtate of free ſervants, and attendants upon noblemen and gentlemen, which are no ways inferior unto the yeomanry for arms: and therefore out of all queſtion, the ſplendour and magnificence, and great retinues, and hoſpitality of noblemen and gentlemen, received into cuſtom, doth much conduce unto martial greatneſs: whereas, contrariwiſe, the cloſe and reſerved living of noblemen and gentlemen, cauſeth a penury of military forces.

By all means it is to be procured, that the trunk of *Nebuchadnezzar's* tree of monarchy be great enough to bear the branches of the boughs: that is, that the natural ſubjects of the crown or ſtate, bear a ſufficient proportion to the ſtrange ſubjects that they govern. Therefore all ſtates, that are liberal of naturalization towards ſtrangers, are fit for empire. For to think that an handful of people can, with the greateſt courage and policy in the world, embrace too large extent of dominion, it may hold for a time, but it will fail ſuddenly. The *Spartans* were a nice people in point of naturalization; whereby, while they kept their compaſs, they ſtood firm; but when they did ſpread, and their boughs were become too great for their ſtem, they became a windfal upon the ſudden. Never any ſtate was, in this point, ſo open to receive ſtrangers into their body, as were the *Romans*; therefore it ſorted with them accordingly, for they grew to the greateſt monarchy. Their manner was to grant naturalization, (which they called *jus civitatis)* and to grant it in the higheſt degree, that is, not only *jus commercii*, *jus connubii*, *jus haereditatis*; but alſo, *jus ſuffragii*, and *jus honorum:* and this not to ſingular perſons alone, but likewiſe to whole families; yea, to cities, and ſometimes to nations. Add to this, their cuſtom of plantation of colonies, whereby the *Roman* plant was removed into the ſoil of other nations: and putting both conſtitutions together, you will ſay, that it was not the *Romans* that ſpread upon the world, but it was the world that ſpread upon the *Romans*; and that was the ſure way of greatneſs. I have marvailed ſometimes at *Spain*, how they claſp and contain ſo large dominions, with ſo few natural *Spaniards:* But ſure, the whole compaſs of *Spain* is a very great body of a tree, far above *Rome* and *Sparta* at the firſt. And beſides, though they have not had that uſage, to naturalize liberally, yet they have that which is next to it: that is, to employ, almoſt indifferently, all nations, in their militia of ordinary ſoldiers; yea, and ſometimes in their higheſt commands. Nay, it ſeemeth at this inſtant, they are ſenſible of this want of natives; as by the pragmatical ſanction, now publiſhed, appeareth.

It is certain, that ſedentary and within-door arts, and delicate manufactures, (that require rather the finger than the arm) have in their nature a contrariety to a military diſpoſition. And generally all warlike people are a little idle, and love danger better than travail: neither muſt they be too much broken of it, if they ſhall be preſerved in vigour. Therefore it was great advantage in the ancient ſtates of *Sparta*, *Athens*, *Rome*, and others, that they had the uſe of ſlaves, which commonly did rid thoſe manufactures. But that is aboliſhed, in greateſt part, by the chriſtian law. That which

cometh

cometh neareſt to it, is, to leave thoſe arts chiefly to ſtrangers, (which for that purpoſe are the more eaſy to be received) and to contain the principal bulk of the vulgar natives within thoſe three kinds; tillers of the ground, free ſervants, and handycraftſmen, of ſtrong and manly arts; as ſmiths, maſons, carpenters, *&c.* not reckoning ſoldiers.

But above all, for empire and greatneſs, it importeth moſt; that a nation do profeſs arms as their principal honour, ſtudy and occupation. For the things which we formerly have ſpoken of, are but habilitations towards arms: and what is habilitation without intention and act? *Romulus*, after his death, (as they report or feign) ſent a preſent to the *Romans*, that above all they ſhould intend arms, and then they ſhould prove the greateſt empire of the world. The fabrick of the ſtate of *Sparta* was wholly (though not wiſely) framed and compoſed, to that ſcope and end. The *Perſians* and *Macedonians* had it for a flaſh. The *Gauls*, *Germans*, *Goths*, *Saxons*, *Normans*, and others, had it for a time. The *Turks* have it at this day, though in great declination. Of Chriſtian *Europe* they that have it, are in effect only the *Spaniards*. But it is ſo plain, that every man profiteth in that he moſt intendeth, that it needeth not to be ſtood upon. It is enough to point at it; that no nation which doth not directly profeſs arms, may look to have greatneſs fall into their mouths. And on the other ſide, it is a moſt certain oracle of time, that thoſe ſtates that continue long in that profeſſion, (as the *Romans* and *Turks* principally have done) do wonders: And thoſe that have profeſſed arms but for an age, have notwithſtanding commonly attained that greatneſs in that age, which maintained them long after, when their profeſſion and exerciſe of arms hath grown to decay.

Incident to this point is, for a ſtate to have thoſe laws or cuſtoms, which may reach forth unto them juſt occaſions (as may be pretended) of war. For there is that juſtice imprinted on the nature of men, that they enter not upon wars (whereof ſo many calamities do enſue) but upon ſome, at the leaſt ſpecious, grounds and quarrels. The *Turk* hath at hand, for cauſe of war, the propagation of his law or ſect, a quarrel that he may always command. The *Romans*, though they eſteemed the extending the limits of their empire to be great honour to their generals, when it was done; yet they never reſted upon that alone to begin a war. Firſt therefore, let nations that pretend to greatneſs have this, that they be ſenſible of wrongs, either upon borderers, merchants, or politick miniſters; and that they ſit not too long upon a provocation. Secondly, let them be preſs'd, and ready to give aids and ſuccours to their confederates; as it ever was with the *Romans:* inſomuch, as if the confederate had leagues defenſive with divers other ſtates, and upon invaſion offered, did implore their aids ſeverally, yet the *Romans* would ever be the foremoſt, and leave it to none other to have the honour. As for the wars, which were anciently made on the behalf of a kind of party, or tacit conformity of eſtate, I do not ſee how they may be well juſtified; as when the *Romans* made a war for the liberty of *Graecia*; or when the *Lacedaemonians* and *Athenians* made wars, to ſet up or pull down democracies and oligarchies: Or when wars were made by foreigners, under the pretence of juſtice, or protection, to deliver the ſubjects of others from tyranny and oppreſſion, and the like. Let it ſuffice, that no eſtate expect to be great that is not awake, upon any juſt occaſion of arming.

No body can be healthful without exerciſe, neither natural body, nor politick: and certainly, to a kingdom or eſtate, a juſt and honourable war is

the true exercise. A civil war, indeed, is like the heat of a fever; but a foreign war is like the heat of exercise, and serveth to keep the body in health. For in a slothful peace, both courages will effeminate, and manners corrupt. But howsoever it be for happiness; without all question, for greatness, it maketh, to be still, for the most part, in arms: and the strength of a veteran army, (though it be a chargeable business) always on foot, is that which commonly giveth the law; or at least the reputation amongst all neighbour states, as may well be seen in *Spain*; which hath had, in one part or other, a veteran army, almost continually, now by the space of six-score years.

To be master of the sea, is an abridgment of a monarchy. *Cicero* writing to *Atticus*, of *Pompey* his preparation against *Caesar*, saith, *Consilium Pompeii plane Themistocleum est; putat enim, qui mari potitur, eum rerum potiri.* And without doubt *Pompey* had tired out *Caesar*, if upon vain confidence he had not left that way. We see the great effects of battels by sea. The battel of *Actium* decided the empire of the world. The battel of *Lepanto* arrested the greatness of the *Turk*. There be many examples, where sea fights have been final to the war; but this is, when princes or states have set up their rest upon the battels. But thus much is certain; that he that commands the sea is at great liberty, and may take as much and as little of the war, as he will. Whereas those that be strongest by land, are many times, nevertheless, in great straits. Surely, at this day, with us of *Europe*, the vantage of strength at sea (which is one of the principal dowries of this kingdom of *Great Britain)* is great: both because most of the kingdoms of *Europe* are not merely inland, but girt with the sea, most part of their compass; and because the wealth of both *Indies* seems in great part but an accessary to the command of the seas.

The wars of latter ages seem to be made in the dark, in respect of the glory and honour which reflected upon men, from the wars in ancient time. There be now, for martial encouragement, some degrees and orders of chivalry, which nevertheless are conferred promiscuously upon soldiers, and no soldiers, and some remembrance perhaps upon the escutcheon, and some hospitals for maimed soldiers, and such like things. But in ancient times, the trophies erected upon the place of the victory; the funeral laudatives and monuments for those that died in the wars; the crowns and garlands personal; the style of emperor, which the great kings of the world after borrowed; the triumphs of the generals upon their return; the great donatives and largesses upon the disbanding of the armies, were things able to enflame all mens courages: but above all, that of the triumph, amongst the *Romans*, was not pageants or gaudery, but one of the wisest and noblest institutions that ever was. For it contained three things; honour to the general; riches to the treasury out of the spoils; and donatives to the army. But that honour, perhaps, were not fit for monarchies; except it be in the person of the monarch himself, or his sons; as it came to pass, in the times of the *Roman* emperors, who did impropriate the actual triumphs to themselves and their sons, for such wars as they did atchieve in person; and left only, for wars atchieved by subjects, some triumphal garments and ensigns to the general.

To conclude: no man can, by *care taking*, (as the scripture saith) *add a cubit to his stature*, in this little model of a man's body: but in the great frame of kingdoms, and commonwealths, it is in the power of princes, or estates, to add amplitude and greatness to their kingdoms. For by introducing

such

ſuch ordinances, conſtitutions and cuſtoms as we have now touched, they may ſow greatneſs to their poſterity and ſucceſſion. But theſe things are commonly not obſerved, but left to take their chance.

## XXXI. *Of regiment of health.*

THERE is a wiſdom in this beyond the rules of phyſick: a man's own obſervation, what he finds good of, and what he finds hurt of, is the beſt phyſick to preſerve health. But it is a ſafer concluſion to ſay, this agreeth not well with me, therefore I will not continue it; than this, I find no offence of this, therefore I may uſe it. For ſtrength of nature in youth paſſeth over many exceſſes, which are owing a man till his age. Diſcern of the coming on of years, and think not to do the ſame things ſtill; for age will not be defied. Beware of ſudden change in any great point of diet, and if neceſſity enforce it, fit the reſt to it. For it is a ſecret both in nature and ſtate, that it is ſafer to change many things than one. Examine thy cuſtoms of diet, ſleep, exerciſe, apparel, and the like; and try in any thing thou ſhalt judge hurtful, to diſcontinue it by little and little; but ſo, as if thou doſt find any inconvenience by the change, thou come back to it again: for it is hard to diſtinguiſh that which is generally held good and wholeſome, from that which is good particularly, and fit for thine own body. To be free-minded, and chearfully diſpoſed at hours of meat, and of ſleep, and of exerciſe, is one of the beſt precepts of long laſting. As for the paſſions and ſtudies of the mind, avoid envy, anxious fears, anger fretting inwards, ſubtile and knotty inquiſitions, joys and exhilarations in exceſs, ſadneſs not communicated. Entertain hopes, mirth rather than joy, variety of delights, rather than ſurfeit of them; wonder and admiration, and therefore novelties; ſtudies that fill the mind with ſplendid and illuſtrious objects, as hiſtories, fables, and contemplations of nature. If you fly phyſick in health altogether, it will be too ſtrange for your body when you ſhall need it. If you make it too familiar, it will work no extraordinary effect when ſickneſs cometh. I commend rather ſome diet for certain ſeaſons, than frequent uſe of phyſick, except it be grown into a cuſtom. For thoſe diets alter the body more, and trouble it leſs. Deſpiſe no new accident in your body, but aſk opinion of it. In ſickneſs, reſpect health principally; and in health, action. For thoſe that put their bodies to endure in health, may in moſt ſickneſſes which are not very ſharp, be cured only with diet, and tendering. *Celſus* could never have ſpoken it as a phyſician, had he not been a wiſe man withal; when he giveth it for one of the great precepts of health and laſting, that a man do vary and interchange contraries; but with an inclination to the more benign extreme. Uſe faſting and full eating, but rather full eating; watching and ſleep, but rather ſleep; ſitting and exerciſe, but rather exerciſe; and the like. So ſhall nature be cheriſhed, and yet taught maſteries. Phyſicians are ſome of them ſo pleaſing and conformable to the humour of the patient, as they preſs not the true cure of the diſeaſe; and ſome other are ſo regular in proceeding according to art for the diſeaſe, as they reſpect not ſufficiently the condition of the patient. Take one of a middle temper; or if it may not be found in one man, combine two of either ſort; and forget not to call as well the beſt acquainted with your body, as the beſt reputed of for his faculty.

## XXXII. *Of ſuſpicion.*

SUSPICIONS amongſt thoughts, are like bats amongſt birds, they ever fly

by twilight. Certainly they are to be repreſſed, or at the leaſt well guarded: for they cloud the mind, they loſe friends, and they check with buſineſs, whereby buſineſs cannot go on currently and conſtantly. They diſpoſe kings to tyranny, huſbands to jealouſy, wiſe men to irreſolution and melancholy. They are defects, not in the heart but in the brain; for they take place in the ſtouteſt natures; as in the example of *Henry* the ſeventh of *England*; there was not a more ſuſpicious man, nor a more ſtout. And in ſuch a compoſition they do ſmall hurt. For commonly they are not admitted but with examination, whether they be likely or no? But in fearful natures they gain ground too faſt. There is nothing makes a man ſuſpect much, more than to know little: and therefore men ſhould remedy ſuſpicion, by procuring to know more, and not to keep their ſuſpicions in ſmother. What would men have? Do they think thoſe they employ and deal with are ſaints? Do they not think they will have their own ends, and be truer to themſelves than to them? Therefore there is no better way to moderate ſuſpicions, than to account upon ſuch ſuſpicions as true, and yet to bridle them as falſe, for ſo far a man ought to make uſe of ſuſpicions, as to provide, as if that ſhould be true that he ſuſpects, yet it may do him no hurt. Suſpicions that the mind of it ſelf gathers, are but buzzes; but ſuſpicions that are artificially nouriſhed, and put into mens heads by the tales and whiſperings of others, have ſtings. Certainly the beſt mean to clear the way in this ſame wood of ſuſpicions, is frankly to communicate them with the party that he ſuſpects; for thereby he ſhall be ſure to know more of the truth of them than he did before; and withal ſhall make that party more circumſpect, not to give farther cauſe of ſuſpicion. But this would not be done to men of baſe natures: for they, if they find themſelves once ſuſpected, will never be true. The *Italian* ſays, *Soſpetto licentia fede*; as if ſuſpicion did give a paſſport to faith; but it ought rather to kindle it to diſcharge it ſelf.

## XXXIII. *Of diſcourſe.*

Some in their diſcourſe deſire rather commendation of wit, in being able to hold all arguments, than of judgment in diſcerning what is true: as if it were a praiſe to know what might be ſaid, and not what ſhould be thought. Some have certain common places and themes, wherein they are good and want variety: which kind of poverty is for the moſt part tedious, and, when it is once perceived, ridiculous. The honourableſt part of talk is to give the occaſion; and again to moderate and paſs to ſomewhat elſe, for then a man leads the dance. It is good in diſcourſe, and ſpeech of converſation, to vary, and intermingle ſpeech of the preſent occaſion with arguments; tales with reaſons; aſking of queſtions, with telling of opinions; and jeſt with earneſt: for it is a dull thing to tire, and as we ſay now, to jade any thing too far. As for jeſt, there be certain things which ought to be privileged from it; namely, religion, matters of ſtate, great perſons, any man's preſent buſineſs of importance, and any caſe that deſerveth pity. Yet there be ſome that think their wits have been aſleep, except they dart out ſomewhat that is piquant, and to the quick: that is a vein which would be bridled;

*Parce puer ſtimulis, & fortius utere loris.*

And generally men ought to find the difference between ſaltneſs and bitterneſs. Certainly he that hath a ſatyrical vein, as he maketh others afraid

of

of his wit, ſo he had need be afraid of others memory. He that queſtioneth much ſhall learn much; and content much, but eſpecially if he apply his queſtions to the ſkill of the perſons whom he aſketh: for he ſhall give them occaſion to pleaſe themſelves in ſpeaking, and himſelf ſhall continually gather knowledge. But let his queſtions not be troubleſome, for that is fit for a poſer. And let him be ſure to leave other men their turns to ſpeak. Nay, if there be any that would reign, and take up all the time, let him find means to take them off, and bring others on; as muſicians uſe to do with thoſe that dance too long galliards. If you diſſemble ſometimes your knowledge of that you are thought to know, you ſhall be thought another time to know that you know not. Speech of a man's ſelf ought to be ſeldom, and well choſen. I knew one was wont to ſay in ſcorn, he muſt needs be a wiſe man he ſpeaks ſo much of himſelf: and there is but one caſe wherein a man may commend himſelf with good grace, and that is in commending virtue in another; eſpecially if it be ſuch a virtue whereunto himſelf pretendeth. Speech of touch towards others, ſhould be ſparingly uſed: for diſcourſe ought to be as a field, without coming home to any man. I knew two noblemen of the weſt part of *England*, whereof the one was given to ſcoff, but kept ever royal cheer in his houſe; the other would aſk of thoſe that had been at the other's table, tell truly, was there never a flout or dry blow given? To which the gueſt would anſwer; ſuch and ſuch a thing paſſed. The lord would ſay, I thought he would mar a good dinner. Diſcretion of ſpeech is more than eloquence; and to ſpeak agreeably to him with whom we deal, is more than to ſpeak in good words, or in good order. A good continued ſpeech, without a good ſpeech of interlocution, ſhews ſlowneſs: and a good reply, or ſecond ſpeech, without a good ſettled ſpeech, ſheweth ſhallowneſs and weakneſs. As we ſee in beaſts, that thoſe that are weakeſt in the courſe, are yet nimbleſt in the turn: as it is betwixt the greyhound and the hare. To uſe too many circumſtances ere one come to the matter, is weariſome; to uſe none at all is blunt.

## XXXIV. *Of plantations.*

PLANTATIONS are amongſt ancient, primitive, and heroical works. When the world was young, it begat more children; but now it is old, it begets fewer: for I may juſtly account new plantations to be the children of former kingdoms. I like a plantation in a pure ſoil; that is, where people are not diſplanted to the end to plant in others. For elſe it is rather an extirpation, than a plantation. Planting of countries, is like planting of woods; for you muſt make account to loſe almoſt twenty years profit, and expect your recompence in the end. For the principal thing that hath been the deſtruction of moſt plantations, hath been the baſe and haſty drawing of profit in the firſt years. It is true, ſpeedy profit is not to be neglected, as far as may ſtand with the good of the plantation, but no farther. It is a ſhameful and unbleſſed thing, to take the ſcum of people, and wicked condemned men, to be the people with whom you plant; and not only ſo, but it ſpoileth the plantation; for they will ever live like rogues, and not fall to work, but be lazy, and do miſchief, and ſpend victuals, and be quickly weary, and then certify over to their countrey, to the diſcredit of the plantation. The people wherewith you plant, ought to be gardeners, ploughmen, labourers, ſmiths, carpenters, joyners, fiſhermen, fowlers, with ſome few apothecaries, ſurgeons, cooks and bakers. In a countrey of

plantation,

plantation, firſt look about what kind of victual the countrey yields of it ſelf to hand; as cheſtnuts, walnuts, pine-apples, olives, dates, plumbs, cherries, wild honey, and the like, and make uſe of them. Then conſider what victual, or eſculent things there are, which grow ſpeedily, and within the year; as parſnips, carrets, turnips, onions, radiſh, artichokes of *Hieruſalem*, maiz, and the like. For wheat, barley, and oats, they aſk too much labour: but with peaſe and beans you may begin; both becauſe they aſk leſs labour, and becauſe they ſerve for meat, as well as for bread. And of rice likewiſe cometh a great increaſe, and it is a kind of meat. Above all, there ought to be brought ſtore of biſket, oatmeal, flower, meal, and the like, in the beginning, till bread may be had. For beaſts or birds, take chiefly ſuch as are leaſt ſubject to diſeaſes, and multiply faſteſt: as ſwine, goats, cocks, hens, turkeys, geeſe, houſe-doves, and the like. The victual in plantations, ought to be expended almoſt as in a beſieged town; that is, with certain allowance. And let the main part of the ground employed to gardens or corn, be to a common ſtock; and to be laid in, and ſtored up, and then delivered out in proportion; beſides ſome ſpots of ground that any particular perſon will manure for his own private. Conſider likewiſe what commodities the ſoil where the plantation is doth naturally yield, that they may ſome way help to defray the charge of the plantation: ſo it be not, as was ſaid, to the untimely prejudice of the main buſineſs; as it hath fared with tobacco in *Virginia*. Wood commonly aboundeth but too much; and therefore timber is fit to be one. If there be iron ore, and ſtreams whereupon to ſet the mills; iron is a brave commodity where wood aboundeth. Making of bay-ſalt, if the climate be proper for it, would be put in experience. Growing ſilk likewiſe, if any be, is a likely commodity. Pitch and tar, where ſtore of firs and pines are, will not fail. So drugs, and ſweet woods, where they are, cannot but yield great profit. Soap aſhes likewiſe, and other things that may be thought of. But moil not too much under ground, for the hope of mines is very uncertain, and uſeth to make the planters lazy in other things. For government, let it be in the hands of one aſſiſted with ſome counſel: and let them have commiſſion to exerciſe martial laws with ſome limitation. And above all, let men make that profit of being in the wilderneſs, as they have God always, and his ſervice, before their eyes. Let not the government of the plantation depend upon too many counſellors and undertakers, in the countrey that planteth, but upon a temperate number; and let thoſe be rather noblemen and gentlemen, than merchants; for they look ever to the preſent gain. Let there be freedoms from cuſtom, till the plantation be of ſtrength: and not only freedom from cuſtom, but freedom to carry their commodities where they may make their beſt of them, except there be ſome ſpecial cauſe of caution. Cram not in people, by ſending too faſt, company after company; but rather hearken how they waſte, and ſend ſupplies proportionably; but ſo as the number may live well in the plantation, and not by ſurcharge be in penury. It hath been a great endangering to the health of ſome plantations, that they have built along the ſea and rivers, in mariſh and unwholeſome grounds. Therefore though you begin there to avoid carriage, and other like diſcommodities, yet build ſtill rather upwards from the ſtreams, than along. It concerneth likewiſe the health of the plantation, that they have good ſtore of ſalt with them, that they may uſe it in their victuals when it ſhall be neceſſary. If you plant where ſavages are, do not only entertain them with trifles and jingles; but uſe them juſtly

juſtly and graciouſly, with ſufficient guard nevertheleſs: and do not win their favour by helping them to invade their enemies, but for their defence it is not amiſs. And ſend oft of them over to the countrey that plants, that they may ſee a better condition than their own, and commend it when they return. When the plantation grows to ſtrength, then it is time to plant with women, as well as with men; that the plantation may ſpread into generations; and not be ever pieced from without. It is the ſinfulleſt thing in the world, to forſake or deſtitute a plantation once in forwardneſs: for beſides the diſhonour, it is the guiltineſs of blood of many commiſerable perſons.

## XXXV. *Of riches.*

I cannot call riches better than the baggage of virtue. The *Roman* word is better, *impedimenta*. For as the baggage is to an army, ſo are riches to virtue. It cannot be ſpared, nor left behind, but it hindreth the march; yea, and the care of it, ſometimes, loſeth or diſturbeth the victory: of great riches there is no real uſe, except it be in the diſtribution; the reſt is but conceit. So ſaith *Solomon*; *where much is, there are many to conſume it; and what hath the owner, but the ſight of it with his eyes?* The perſonal fruition in any man, cannot reach to feel great riches: there is a cuſtody of them; or a power of dole and donative of them; or a fame of them; but no ſolid uſe to the owner. Do you not ſee what feigned princes are ſet upon little ſtones and rarities? And what works of oſtentation are undertaken, becauſe there might ſeem to be ſome uſe of great riches? But then you will ſay they may be of uſe, to buy men out of dangers or troubles. As *Solomon* ſaith, *riches are as a ſtrong hold, in the imagination of the rich man.* But this is excellently expreſſed, that it is in imagination, and not always in fact. For certainly great riches have ſold more men than they have bought out. Seek not proud riches, but ſuch as thou mayſt get juſtly, uſe ſoberly, diſtribute chearfully, and leave contentedly; yet have no abſtract nor friarly contempt of them: But diſtinguiſh, as *Cicero* ſaith well of *Rabirius Poſthumus*; *in ſtudio rei amplificandae, apparebat, non avaritiae praedam, ſed inſtrumentum bonitati quaeri.* Hearken alſo to *Solomon*, and beware of haſty gathering of riches: *Qui feſtinat ad divitias, non erit inſons.* The poets feign, that when *Plutus* (which is riches) is ſent from *Jupiter*, he limps, and goes ſlowly; but when he is ſent from *Pluto*, he runs, and is ſwift of foot: meaning, that riches gotten by good means and juſt labour, pace ſlowly; but when they come by the death of others, (as by the courſe of inheritance, teſtaments, and the like,) they come tumbling upon a man. But it might be applied likewiſe to *Pluto*, taking him for the devil. For when riches come from the devil, (as by fraud, and oppreſſion, and unjuſt means,) they come upon ſpeed. The ways to enrich are many, and moſt of them foul. Parſimony is one of the beſt, and yet is not innocent: for it withholdeth men from works of liberality and charity. The improvement of the ground is the moſt natural obtaining of riches; for it is our great mother's bleſſing, the earth; but it is ſlow. And yet, where men of great wealth do ſtoop to huſbandry, it multiplieth riches exceedingly. I knew a nobleman in *England* that had the greateſt audits of any man in my time; a great graſier, a great ſheep maſter, a great timber man, a great collier, a great cornmaſter, a great lead man; and ſo of iron, and a number of the like points of huſbandry: ſo as the earth ſeemed a ſea to him, in reſpect of the

the perpetual importation. It was truly obſerved by one, that himſelf came very hardly to a little riches, and very eaſily to great riches. For when a man's ſtock is come to that, that he can expect the prime of markets, and overcome thoſe bargains, which for their greatneſs are few mens money, and be partner in the induſtries of younger men, he cannot but encreaſe mainly. The gains of ordinary trades and vocations are honeſt, and furthered by two things, chiefly, by diligence, and by a good name for good and fair dealing: but the gains of bargains are of a more doubtful nature, when men ſhould wait upon others neceſſity; broke by ſervants and inſtruments to draw them on; put off others cunningly that would be better chapmen, and the like practices, which are crafty and naught: As for the chopping of bargains, when a man buys, not to hold, but to ſell over again, that commonly grindeth double, both upon the ſeller, and upon the buyer. Sharings do greatly enrich, if the hands be well choſen that are truſted. Uſury is the certaineſt means of gain, though one of the worſt, as that whereby a man doth eat his bread *in ſudore vultus alieni*; and beſides, doth plough upon *Sundays*. But yet certain though it be, it hath flaws; for that the ſcriveners and brokers do value unſound men, to ſerve their own turn. The fortune, in being the firſt in an invention, or in a privilege, doth cauſe ſometimes a wonderful overgrowth in riches; as it was with the firſt ſugar man in the *Canaries*. Therefore, if a man can play the true logician, to have as well judgment as invention, he may do great matters, eſpecially if the times be fit. He that reſteth upon gains certain, ſhall hardly grow to great riches. And he that puts all upon adventures, doth oftentimes break, and come to poverty: it is good therefore to guard adventures with certainties that may uphold loſſes. Monopolies, and co-emption of wares for reſale, where they are not reſtrained, are great means to enrich; eſpecially if the party have intelligence what things are like to come into requeſt, and ſo ſtore himſelf before-hand. Riches gotten by ſervice, though it be of the beſt riſe, yet when they are gotten by flattery, feeding humours, and other ſervile conditions, they may be placed amongſt the worſt. As for fiſhing for teſtaments and executorſhips, (as *Tacitus* ſaith of *Seneca*, *Teſtamenta & orbos tanquam indagine capi*,) it is yet worſe; by how much men ſubmit themſelves to meaner perſons, than in ſervice. Believe not much them, that ſeem to deſpiſe riches; for they deſpiſe them that deſpair of them; and none worſe when they come to them. Be not penny-wiſe; riches have wings, and ſometimes they fly away of themſelves, ſometimes they muſt be ſet flying to bring in more. Men leave their riches either to their kindred, or to the publick: and moderate portions proſper beſt in both. A great eſtate left to an heir, is as a lure to all the birds of prey round about, to ſeize on him, if he be not the better ſtabliſhed in years and judgment. Likewiſe glorious gifts and foundations, are like ſacrifices without ſalt; and but the painted ſepulchres of arms, which ſoon will putrefy and corrupt inwardly. Therefore meaſure not thine advancements by quantity, but frame them by meaſure; and defer not charities till death. For certainly, if a man weigh it rightly, he that doth ſo, is rather liberal of another man's, than of his own.

## XXXVI. *Of prophecies.*

I mean not to ſpeak of divine prophecies, nor of heathen oracles, nor of natural predictions; but only of prophecies that have been of certain memory,

ry, and from hidden cauſes. Saith the *Pythoniſſa* to *Saul*; *To-morrow thou and thy ſon ſhall be with me.* *Virgil* hath theſe verſes from *Homer:*

*At domus AEneae cunctis dominabitur oris,*
*Et nati natorum, & qui naſcentur ab illis.* AEneid. iii. 97.

A prophecy, as it ſeems, of the *Roman* empire. *Seneca* the tragedian hath theſe verſes:

*——— Venient annis*
*Saecula ſeris, quibus oceanus*
*Vincula rerum laxet, & ingens*
*Pateat tellus, Tiphyſque novos*
*Detegat orbes; nec ſit terris*
*Ultima Thule:*

A prophecy of the diſcovery of *America.* The daughter of *Polycrates* dreamed, that *Jupiter* bathed her father, and *Apollo* anointed him: And it came to paſs, that he was crucified in an open place, where the ſun made his body run with ſweat, and the rain waſhed it. *Philip* of *Macedon* dreamed, he ſealed up his wife's belly; whereby he did expound it, that his wife ſhould be barren: But *Ariſtander* the ſoothſayer told him, his wife was with child, becauſe men do not uſe to ſeal veſſels that are empty. A phantaſm that appeared to *M. Brutus* in his tent, ſaid to him; *Philippis iterum me videbis.* *Tiberius* ſaid to *Galba*, *Tu quoque, Galba, deguſtabis imperium.* In *Veſpaſian*'s time there went a prophecy in the eaſt, that thoſe that ſhould come forth of *Judaea*, ſhould reign over the world; which though it may be was meant of our Saviour, yet *Tacitus* expounds it of *Veſpaſian.* *Domitian* dreamed, the night before he was ſlain, that a golden head was growing out of the nape of his neck: and indeed the ſucceſſion that followed him, for many years, made golden times. *Henry* the ſixth of *England*, ſaid of *Henry* the ſeventh, when he was a lad, and gave him water; this is the lad that ſhall enjoy the crown for which we ſtrive. When I was in *France*, I heard from one Dr. *Pena*, that the queen mother, who was given to curious arts, cauſed the king her huſband's nativity to be calculated under a falſe name; and the aſtrologer gave a judgment, that he ſhould be killed in a duel; at which the queen laughed, thinking her huſband to be above challenges and duels: but he was ſlain, upon a courſe at tilt, the ſplinters of the ſtaff of *Montgomery* going in at his bever. The trivial prophecy, which I heard when I was a child, and queen *Elizabeth* was in the flower of her years, was;

*When hempe is ſpun,*
England's *done.*

Whereby it was generally conceived, that after the princes had reigned, which had the principal letters of that word hempe, (which were *Henry*, *Edward*, *Mary*, *Philip*, and *Elizabeth*) *England* ſhould come to utter confuſion: which, thanks be to God, is verified only in the change of the name, for that the king's ſtyle is now no more of *England*, but of *Britain.* There was alſo another prophecy before the year of eighty eight, which I do not well underſtand.

*There ſhall be ſeen upon a day,*
*Between the baugh and the* May,
*The black fleet of* Norway.
*When that that is come and gone,*
England *build houſes of lime and ſtone,*
*For after wars ſhall you have none.*

It was generally conceived to be meant of the *Spaniſh* fleet that came in eighty eight. For that the king of *Spain*'s ſurname, as they ſay, is *Norway*. The prediction of *Regiomontanus*,

*Octogeſimus octavus mirabilis annus:*

was thought likewiſe accompliſhed, in the ſending of that great fleet, being the greateſt in ſtrength, though not in number, of all that ever ſwam upon the ſea. As for *Cleon*'s dream, I think it was a jeſt: It was, that he was devoured of a long dragon; and it was expounded of a maker of ſauſages, that troubled him exceedingly. There are numbers of the like kind; eſpecially if you include dreams, and predictions of aſtrology. But I have ſet down theſe few only of certain credit, for example. My judgment is, that they ought all to be deſpiſed, and ought to ſerve but for winter talk by the fire-ſide. Though when I ſay deſpiſed, I mean it as for belief: for otherwiſe, the ſpreading or publiſhing them, is in no ſort to be deſpiſed; for they have done much miſchief. And I ſee many ſevere laws made to ſuppreſs them: That that hath given them grace, and ſome credit, conſiſteth in three things: firſt, that men mark when they hit, and never mark when they miſs; as they do, generally, alſo of dreams. The ſecond is, that probable conjectures, or obſcure traditions, many times, turn themſelves into prophecies: while the nature of man, which coveteth divination, thinks it no peril to foretel that, which indeed they do but collect; as that of *Seneca*'s verſe. For ſo much was then ſubject to demonſtration, that the globe of the earth had great parts beyond the Atlantick, which might be probably conceived not to be all ſea: and adding thereto, the tradition of *Plato*'s *Timæus*, and his *Atlanticus*, it might encourage one to turn it to a prediction. The third and laſt, (which is the great one) is, that almoſt all of them, being infinite in number, have been impoſtures, and by idle and crafty brains, merely contrived and feigned, after the event paſt.

## XXXVII. *Of ambition.*

Ambition is like choler, which is an humour that maketh men active, earneſt, full of alacrity and ſtirring, if it be not ſtopped. But if it be ſtopped, and cannot have its way, it becometh aduſt, and thereby malign and venomous. So ambitious men, if they find the way open for their riſing, and ſtill get forward, they are rather buſy than dangerous; but if they be check'd in their deſires, they become ſecretly diſcontent, and look upon men and matters with an evil eye, and are beſt pleaſed when things go backward; which is the worſt property in a ſervant of a prince or ſtate. Therefore it is good for princes, if they uſe ambitious men, to handle it ſo, as they be ſtill progreſſive, and not retrograde; which, becauſe it cannot be without inconvenience, it is good not to uſe ſuch natures at all. For if they riſe not with their ſervice, they will take order to make their ſervice fall with them. But ſince we have ſaid, it were good not to uſe men of ambitious natures, except it be upon neceſſity, it is fit we ſpeak, in what caſes, they

they are of neceſſity. Good commanders in the wars muſt be taken, be they never ſo ambitious: for the uſe of their ſervice diſpenſeth with the reſt; and to take a ſoldier without ambition, is to pull off his ſpurs. There is alſo great uſe of ambitious men, in being ſcreens to princes, in matters of danger and envy: for no man will take that part, except he be like a ſeeled dove, that mounts and mounts, becauſe he cannot ſee about him. There is uſe alſo of ambitious men, in pulling down the greatneſs of any ſubject that over-tops: as *Tiberius* uſed *Macro* in the pulling down of *Sejanus*. Since therefore they muſt be uſed in ſuch caſes, there reſteth to ſpeak, how they are to be bridled, that they may be leſs dangerous. There is leſs danger of them, if they be of mean birth, than if they be noble; and if they be rather harſh of nature, than gracious and popular; and if they be rather new raiſed, than grown cunning and fortified in their greatneſs. It is counted by ſome a weakneſs in princes to have favourites; but it is, of all others, the beſt remedy againſt ambitious great ones. For when the way of pleaſuring and diſpleaſuring lieth by the favourite, it is impoſſible any other ſhould be over-great. Another means to curb them, is to balance them by others as proud as they. But then there muſt be ſome middle counſellors to keep things ſteddy; for without that ballaſt, the ſhip will roul too much. At the leaſt, a prince may animate and inure ſome meaner perſons, to be as it were ſcourges to ambitious men. As for the having of them obnoxious to ruin, if they be of fearful natures, it may do well: but if they be ſtout and daring, it may precipitate their deſigns, and prove dangerous. As for the pulling of them down, if the affairs require it, and that it may not be done with ſafety ſuddenly, the only way is, the interchange continually of favours and diſgraces, whereby they may not know what to expect, and be as it were in a wood. Of ambitions, it is leſs harmful the ambition to prevail in great things, than that other to appear in every thing; for that breeds confuſion, and marrs buſineſs: but yet it is leſs danger to have an ambitious man ſtirring in buſineſs, than great in dependences. He that ſeeketh to be eminent amongſt able men, hath a great taſk; but that is ever good for the publick. But he that plots to be the only figure amongſt ciphers, is the decay of a whole age. Honour hath three things in it: the vantage ground to do good; the approach to kings and principal perſons; and the raiſing of a man's own fortunes. He that hath the beſt of theſe intentions, when he aſpireth, is an honeſt man: and that prince that can diſcern of theſe intentions in another that aſpireth, is a wiſe prince. Generally let princes and ſtates chuſe ſuch miniſters as are more ſenſible of duty, than of riſing; and ſuch as love buſineſs rather upon conſcience, than upon bravery: and let them diſcern a buſy nature from a willing mind.

## XXXVIII. *Of maſques and triumphs.*

These things are but toys to come amongſt ſuch ſerious obſervations. But yet ſince princes will have ſuch things, it is better they ſhould be graced with elegancy, than daubed with coſt. Dancing to ſong, is a thing of great ſtate and pleaſure. I underſtand it, that the ſong be in quire, placed aloft, and accompanied with ſome broken muſick: and the ditty fitted to the device. Acting in ſong, eſpecially in dialogues, hath an extreme good grace; I ſay acting, not dancing; (for that is a mean and vulgar thing) and the voices of the dialogue would be ſtrong and manly, (a baſe, and a tenor; no treble) and the ditty high and tragical; not nice or dainty. Several quires placed one over againſt another, and taking the voice by

catches anthem-wiſe, give great pleaſure. Turning dances into figure, is a childiſh curioſity. And generally let it be noted, that thoſe things which I here ſet down, are ſuch as do naturally take the ſenſe, and not reſpect petty wonderments. It is true, the alterations of ſcenes, ſo it be quietly and without noiſe, are things of great beauty and pleaſure; for they feed and relieve the eye before it be full of the ſame object. Let the ſcenes abound with light, eſpecially coloured and varied: and let the maſquers, or any other that are to come down from the ſcene, have ſome motions upon the ſcene it ſelf before their coming down. For it draws the eye ſtrangely, and makes it with great pleaſure to deſire to ſee that it cannot perfectly diſcern. Let the ſongs be loud and cheerful, and not chirpings or pulings. Let the muſick likewiſe be ſharp and loud, and well placed. The colours that ſhew beſt by candle-light, are white, carnation, and a kind of ſea-water green; and ouches, or ſpangs, as they are of no great coſt, ſo they are of moſt glory. As for rich embroidery, it is loſt and not diſcerned. Let the ſuits of the maſquers be graceful, and ſuch as become the perſon when the vizards are off: not after examples of known attires; turks, ſoldiers, mariners, and the like. Let anti-maſques not be long; they have been commonly of fools, ſatyrs, baboons, wild men, anticks, beaſts, ſpirits, witches, aethiopes, pygmies, turquets, nymphs, ruſticks, cupids, ſtatues, moving, and the like. As for angels, it is not comical enough to put them in anti-maſques; and any thing that is hideous, as devils, giants, is on the other ſide as unfit: but chiefly, let the muſick of them be recreative, and with ſome ſtrange changes. Some ſweet odours ſuddenly coming forth without any drops falling, are in ſuch a company as there is ſteam and heat, things of great pleaſure and refreſhment. Double maſques, one of men, another of ladies, addeth ſtate and variety. But all is nothing except the room be kept clear and neat.

For juſts, and tourneys, and barriers, the glories of them are chiefly in the chariots, wherein the challengers make their entry; eſpecially if they be drawn with ſtrange beaſts; as lions, bears, camels, and the like: or in the devices of their entrance, or in bravery of their liveries; or in the goodly furniture of their horſes and armour. But enough of theſe toys.

## XXXIX. *Of nature in men.*

Nature is often hidden, ſometimes overcome, ſeldom extinguiſhed. Force maketh nature more violent in the return; doctrine and diſcourſe maketh nature leſs importune: but cuſtom only doth alter and ſubdue nature. He that ſeeketh victory over his nature, let him not ſet himſelf too great, nor too ſmall taſks; for the firſt will make him dejected by often failing; and the ſecond will make him a ſmall proceeder, though by often prevailings. And at the firſt, let him practiſe with helps, as ſwimmers do with bladders or ruſhes: but after a time, let him practiſe with diſadvantages, as dancers do with thick ſhoes. For it breeds great perfection, if the practice be harder than the uſe. Where nature is mighty, and therefore the victory hard, the degrees had need be, firſt to ſtay and arreſt nature in time; like to him that would ſay over the four and twenty letters when he was angry: then to go leſs in quantity; as if one ſhould, in forbearing wine, come from drinking healths, to a draught at a meal; and laſtly, to diſcontinue altogether. But if a man have the fortitude and reſolution to enfranchiſe himſelf at once, that is the beſt:

*Optimus*

*Optimus ille animi vindex, laedentia pectus*
*Vincula qui rupit, dedoluitque ſemel.*

Neither is the ancient rule amiſs, to bend nature as a wand to a contrary extreme, whereby to ſet it right: underſtanding it where the contrary extreme is no vice. Let not a man force a habit upon himſelf with a perpetual continuance, but with ſome intermiſſion. For both the pauſe reinforceth the new onſet; and if a man that is not perfect, be ever in practice, he ſhall as well practiſe his errors as his abilities, and induce one habit of both: and there is no means to help this but by ſeaſonable intermiſſion. But let not a man truſt his victory over his nature too far; for nature will lie buried a great time, and yet revive upon the occaſion or temptation. Like as it was with *AEſop*'s damſel, turned from a cat to a woman, who ſate very demurely at the board's end, till a mouſe ran before her. Therefore let a man either avoid the occaſion altogether, or put himſelf often to it, that he may be little moved with it. A man's nature is beſt perceived in privateneſs; for there is no affectation in paſſion; for that putteth a man out of his precepts, and in a new caſe or experiment, for there cuſtom leaveth him. They are happy men, whoſe natures ſort with their vocations; otherwiſe they may ſay, *multum incola fuit anima mea:* when they converſe in thoſe things they do not affect. In ſtudies, whatſoever a man commandeth upon himſelf, let him ſet hours for it; but whatſoever is agreeable to his nature, let him take no care for any ſet times: for his thoughts will fly to it of themſelves; ſo as the ſpaces of other buſineſs or ſtudies will ſuffice. A man's nature runs either to herbs, or weeds: therefore let him ſeaſonably water the one, and deſtroy the other.

## XL. *Of cuſtom and education.*

Mens thoughts are much according to their inclination; their diſcourſe and ſpeeches according to their learning and infuſed opinions; but their deeds are after as they have been accuſtomed. And therefore, as *Machiavel* well noteth, (though in an evil-favoured inſtance) there is no truſting to the force of nature, nor to the bravery of words; except it be corroborate by cuſtom. His inſtance is, that for the atchieving of a deſperate conſpiracy, a man ſhould not reſt upon the fierceneſs of any man's nature, or his reſolute undertakings; but take ſuch an one as hath had his hands formerly in blood. But *Machiavel* knew not of a friar *Clement*, nor a *Ravillac*, nor a *Jaureguy*, nor a *Baltazar Gerard:* yet his rule holdeth ſtill, that nature, nor the engagement of words, are not ſo forcible as cuſtom. Only ſuperſtition is now ſo well advanced, that men of the firſt blood, are as firm as butchers by occupation: and votary reſolution is made equipollent to cuſtom, even in matter of blood. In other things, the predominancy of cuſtom is every where viſible; inſomuch as a man would wonder to hear men profeſs, proteſt, engage, give great words, and then do juſt as they have done before: as if they were dead images, and engines moved only by the wheels of cuſtom. We ſee alſo the reign or tyranny of cuſtom what it is. The *Indians* (I mean the ſect of their wiſe men) lay themſelves quietly upon a ſtack of wood, and ſo ſacrifice themſelves by fire. Nay, the wives ſtrive to be burned with the corps of their huſbands. The lads of *Sparta* of ancient time, were wont to be ſcourged upon the altar of *Diana*, without ſo much as queching. I remember in the

the beginning of queen *Elizabeth*'s time of *England*, an *Iriſh* rebel condemned, put up a petition to the deputy, that he might be hanged in a with, and not in an halter, becauſe it had been ſo uſed with former rebels. There be monks in *Ruſſia*, for penance, that will ſit a whole night in a veſſel of water, till they be engaged with hard ice. Many examples may be put of the force of cuſtom, both upon mind and body. Therefore ſince cuſtom is the principal magiſtrate of man's life; let men by all means endeavour to obtain good cuſtoms. Certainly cuſtom is moſt perfect, when it beginneth in young years: this we call education, which is, in effect, but an early cuſtom. So we ſee in languages, the tongue is more pliant to all expreſſions and ſounds, the joints are more ſupple to all feats of activity and motions, in youth than afterwards. For it is true, the late learners cannot ſo well take the ply, except it be in ſome minds that have not ſuffered themſelves to fix, but have kept themſelves open and prepared to receive continual amendment, which is exceeding rare. But if the force of cuſtom ſimple and ſeparate, be great; the force of cuſtom copulate and conjoined, and collegiate, is far greater. For there example teacheth, company comforteth, emulation quickeneth, glory raiſeth: ſo as in ſuch places the force of cuſtom is in its exaltation. Certainly the great multiplication of virtues upon human nature, reſteth upon ſocieties well ordained and diſciplined. For commonwealths and good governments do nourith virtue grown, but do not much mend the ſeeds. But the miſery is, that the moſt effectual means are now applied to the ends leaſt to be deſired.

## XLI. *Of fortune.*

It cannot be denied but outward accidents conduce much to fortune: favour, opportunity, death of others, occaſion fitting virtue. But chiefly, the mould of a man's fortune is in his own hands. *Faber quiſque fortunae ſuae*; ſaith the poet. And the moſt frequent of external cauſes is, that the folly of one man is the fortune of another. For no man proſpers ſo ſuddenly as by others errors. *Serpens niſi ſerpentem comederit non fit draco.* Overt and apparent virtues bring forth praiſe; but there be ſecret and hidden virtues that bring forth fortune: Certain deliveries of a man's ſelf, which have no name. The *Spaniſh* name, *deſemboltura*, partly expreſſeth them: when there be not ſtonds, nor reſtiveneſs in a man's nature; but that the wheels of his mind keep way with the wheels of his fortune. For ſo *Livy* (after he had deſcribed *Cato Major* in theſe words; *in illo viro, tantum robur corporis & animi fuit, ut quocunque loco natus eſſet, fortunam ſibi facturus videretur*;) falleth upon that that he had, *verſatile ingenium.* Therefore if a man look ſharply and attentively, he ſhall ſee fortune: for though ſhe be blind, yet ſhe is not inviſible. The way of fortune is like the milky way in the ſky; which is a meeting or knot of a number of ſmall ſtars, not ſeen aſunder, but giving light together. So are there a number of little, and ſcarce diſcerned virtues, or rather faculties and cuſtoms, that make men fortunate. The *Italians* note ſome of them, ſuch as a man would little think. When they ſpeak of one that cannot do amiſs, they will throw in into his other conditions, that he hath *Poco di matto.* And certainly there be not two more fortunate properties, than to have a little of the fool, and not too much of the honeſt. Therefore extreme lovers of their countrey, or maſters, were never fortunate, neither can they be. For when a man placeth his thoughts without himſelf, he goeth not his own way. And haſty fortune maketh an enterprizer and remover, (the *French* hath

hath it better, *entreprenant*, or *remuant*;) but the exerciſed fortune maketh the able man. Fortune is to be honoured and reſpected, and it be but for her daughters, confidence and reputation. For thoſe two felicity breedeth: the firſt within a man's ſelf; the latter, in others towards him. All wiſe men, to decline the envy of their own virtues, uſe to aſcribe them to providence and fortune; for ſo they may the better aſſume them: and beſides, it is greatneſs in a man to be the care of the higher powers. So *Caeſar* ſaid to the pilot in the tempeſt, *Caeſarem portas, & fortunam ejus.* So *Sylla* choſe the name of *felix*, and not of *magnus*: And it hath been noted, that thoſe that aſcribe openly too much to their own wiſdom and policy, end unfortunate. It is written, that *Timotheus* the *Athenian*, after he had, in the account he gave to the ſtate of his government, often interlaced this ſpeech, and in this fortune had no part; never proſpered in any thing he undertook afterwards. Certainly there be, whoſe fortunes are like *Homer*'s verſes, that have a ſlide and eaſineſs more than the verſes of other poets: as *Plutarch* ſaith of *Timoleon*'s fortune, in reſpect of that of *Ageſilaus*, or *Epaminondas*. And that this ſhould be, no doubt it is much in a man's ſelf.

## XLII. *Of uſury.*

MANY have made witty invectives againſt uſury. They ſay, that it is pity the devil ſhould have God's part, which is the tithe. That the uſurer is the greateſt ſabbath-breaker, becauſe his plough goeth every ſunday. That the uſurer is the drone that *Virgil* ſpeaketh of:

*Ignavum fucos pecus a praeſepibus arcent.*

That the uſurer breaketh the firſt law that was made for mankind after the fall; which was, *in ſudore vultus tui comedes panem tuum*; not, *in ſudore vultus alieni.* That uſurers ſhould have orange-tawney bonnets, becauſe they do judaize. That it is againſt nature, for money to beget money, and the like. I ſay this only, that uſury is a *conceſſum propter duritiem cordis*: for ſince there muſt be borrowing and lending, and men are ſo hard of heart as they will not lend freely, uſury muſt be permitted. Some others have made ſuſpicious and cunning propoſitions of banks, diſcovery of mens eſtates, and other inventions. But few have ſpoken of uſury uſefully. It is good to ſet before us the incommodities and commodities of uſury; that the good may be either weighed out, or culled out; and warily to provide, that while we make forth to that which is better, we meet not with that which is worſe.

THE diſcommodities of uſury are: firſt, that it makes fewer merchants. For were it not for this lazy trade of uſury, money would not lie ſtill, but would in great part be employed upon merchandizing; which is the *vena porta* of wealth in a ſtate. The ſecond, that it makes poor merchants. For as a farmer cannot huſband his ground ſo well, if he ſit at a great rent; ſo the merchant cannot drive his trade ſo well, if he ſit at great uſury. The third is incident to the other two; and that is, the decay of cuſtoms of kings or ſtates, which ebb or flow with merchandizing. The fourth, that it bringeth the treaſure of a realm or ſtate into a few hands. For the uſurer being at certainties, and others at uncertainties, at the end of the game moſt of the money will be in the box; and ever a ſtate flouriſheth, when wealth is more equally ſpread. The fifth, that it beats down the price of land: for the employment of money is chiefly either merchandizing,

dizing, or purchaſing; and uſury way-lays both. The ſixth, that it doth dull and damp all induſtries, improvements, and new inventions, wherein money would be ſtirring, if it were not for this ſlug. The laſt, that it is the canker and ruin of many mens eſtates, which in proceſs of time breeds a publick poverty.

On the other ſide, the commodities of uſury are: firſt, that howſoever uſury in ſome reſpect hindereth merchandizing, yet in ſome other it advanceth it: for it is certain that the greateſt part of trade is driven by young merchants, upon borrowing at intereſt; ſo as if the uſurer either call in, or keep back his money, there will enſue preſently a great ſtand of trade. The ſecond is, that were it not for this eaſy borrowing upon intereſt, mens neceſſities would draw upon them a moſt ſudden undoing; in that they would be forced to ſell their means (be it lands or goods) far under foot; and ſo whereas uſury doth but gnaw upon them, bad markets would ſwallow them quite up. As for mortgaging, or pawning, it will little mend the matter; for either men will not take pawns without uſe; or if they do, they will look preciſely for the forfeiture. I remember a cruel moneyed man in the countrey, that would ſay; the devil take this uſury, it keeps us from forfeitures of mortgages and bonds. The third and laſt is, that it is a vanity to conceive, that there would be ordinary borrowing without profit; and it is impoſſible to conceive the number of inconveniences that will enſue, if borrowing be cramped. Therefore to ſpeak of the aboliſhing of uſury is idle. All ſtates have ever had it in one kind or rate, or other. So as that opinion muſt be ſent to *Utopia*.

To ſpeak now of the reformation and reglement of uſury; how the diſcommodities of it may be beſt avoided, and the commodities retained: It appears by the balance, of commodities and diſcommodities of uſury, two things are to be reconciled. The one, that the tooth of uſury be grinded, that it bite not too much: the other, that there be left open a means to invite moneyed men to lend to the merchants, for the continuing and quickning of trade. This cannot be done, except you introduce two ſeveral ſorts of uſury, a leſs and a greater. For if you reduce uſury to one low rate, it will eaſe the common borrower, but the merchant will be to ſeek for money. And it is to be noted, that the trade of merchandize being the moſt lucrative, may bear uſury at a good rate; other contracts not ſo.

To ſerve both intentions, the way would be briefly thus. That there be two rates of uſury; the one free and general for all; the other under licence only to certain perſons, and in certain places of merchandizing. Firſt therefore let uſury in general be reduced to five in the hundred; and let that rate be proclaimed to be free and current; and let the ſtate ſhut it ſelf out, to take any penalty for the ſame. This will preſerve borrowing from any general ſtop or dryneſs. This will eaſe infinite borrowers in the countrey. This will in good part raiſe the price of land, becauſe land purchaſed at ſixteen years purchaſe, will yield ſix in the hundred and ſomewhat more, whereas this rate of intereſt yields but five. This by like reaſon will encourage and edge induſtrious and profitable improvements; becauſe many will rather venture in that kind, than take five in the hundred, eſpecially having been uſed to greater profit. Secondly, let there be certain perſons licenſed to lend to known merchants, upon uſury at a high rate; and let it be with the cautions following. Let the rate be even with the merchant himſelf, ſomewhat more eaſy than that he uſed formerly to pay: for by that means all borrowers ſhall have ſome eaſe by this reformation, be he

merchant

merchant or whoſoever. Let it be no bank, or common ſtock, but every man be maſter of his own money. Not that I altogether miſlike banks, but they will hardly be brooked in regard of certain ſuſpicions. Let the ſtate be anſwered ſome ſmall matter for the licence, and the reſt left to the lender: for if the abatement be but ſmall, it will no whit diſcourage the lender. For he, for example, that took before ten or nine in the hundred, will ſooner deſcend to eight in the hundred, than give over this trade of uſury: and go from certain gains, to gains of hazard. Let theſe licenſed lenders be in number indefinite, but reſtrained to certain principal cities and towns of merchandizing: for then they will be hardly able to colour other mens moneys in the countrey; ſo as the licence of nine, will not ſuck away the current rate of five: For no man will lend his moneys far off, nor put them into unknown hands.

If it be objected, that this doth in a ſort authorize uſury, which before was in ſome places but permiſſive: the anſwer is, that it is better to mitigate uſury by declaration, than to ſuffer it to rage by connivance.

## XLIII. *Of youth and age.*

A Man that is young in years, may be old in hours, if he have loſt no time. But that happeneth rarely. Generally youth is like the firſt cogitations, not ſo wiſe as the ſecond. For there is a youth in thoughts, as well as in ages. And yet the invention of young men, is more lively than that of old; and imaginations ſtream into their minds better, and as it were more divinely. Natures that have much heat, and great and violent deſires and perturbations, are not ripe for action, till they have paſſed the meridian of their years: as it was with *Julius Caeſar*, and *Septimius Severus*. Of the latter of whom it is ſaid, *juventutem egit, erroribus, imo furoribus plenam*. And yet he was the ableſt emperor, almoſt, of all the liſt. But repoſed natures may do well in youth: as it is ſeen in *Auguſtus Caeſar*, *Coſimus* duke of *Florence*, *Gaſton de Fois*, and others. On the other ſide, heat and vivacity in age, is an excellent compoſition for buſineſs. Young men are fitter to invent than to judge; fitter for execution than for counſel; and fitter for new projects, than for ſettled buſineſs. For the experience of age, in things that fall within the compaſs of it, directeth them; but in new things, abuſeth them. The errors of young men are the ruin of buſineſs; but the errors of aged men amount but to this; that more might have been done, or ſooner. Young men, in the conduct and manage of actions, embrace more than they can hold, ſtir more than they can quiet; fly to the end, without conſideration of the means and degrees; purſue ſome few principles which they have chanced upon abſurdly; care not to innovate, which draws unknown inconveniencies; uſe extreme remedies at firſt; and that which doubleth all errors, will not acknowledge or retract them; like an unready horſe, that will neither ſtop nor turn. Men of age object too much, conſult too long, adventure too little, repent too ſoon, and ſeldom drive buſineſs home to the full period; but content themſelves with a mediocrity of ſucceſs. Certainly it is good to compound employments of both; for that will be good for the preſent, becauſe the virtues of either age may correct the defects of both: and good for ſucceſſion, that young men may be learners, while men in age are actors: and laſtly, good for external accidents, becauſe authority followeth old men, and favour and popularity youth. But for the moral part, perhaps youth will have the prehemineuce, as age hath for the politick. A certain Rabbin upon the

text, *your young men ſhall ſee viſions, and your old men ſhall dream dreams*; inferreth, that young men are admitted nearer to God, than old; becauſe viſion is a clearer revelation than a dream. And certainly, the more a man drinketh of the world, the more it intoxicateth; and age doth profit rather in the powers of underſtanding, than in the virtues of the will and affections. There be ſome have an over-early ripeneſs in their years, which fadeth betimes: theſe are firſt, ſuch as have brittle wits, the edge whereof is ſoon turned; ſuch as was *Hermogenes* the rhetorician, whoſe books are exceeding ſubtile; who afterwards waxed ſtupid. A ſecond ſort is of thoſe that have ſome natural diſpoſitions, which have better grace in youth than in age: ſuch as is a fluent and luxuriant ſpeech; which becomes youth well, but not age. So *Tully* ſaith of *Hortenſius*; *idem manebat, neque idem decebat.* The third is of ſuch as take too high a ſtrain at the firſt; and are magnanimous, more than tract of years can uphold. As was *Scipio Africanus*, of whom *Livy* ſaith in effect; *ultima primis cedebant.*

## XLIV. *Of beauty.*

VIRTUE is like a rich ſtone, beſt plain ſet: and ſurely virtue is beſt in a body that is comely, though not of delicate features; and that hath rather dignity of preſence, than beauty of aſpect. Neither is it almoſt ſeen, that very beautiful perſons are otherwiſe of great virtue. As if nature were rather buſy not to err, than in labour to produce excellency. And therefore they prove accompliſhed, but not of great ſpirit; and ſtudy rather behaviour than virtue. But this holds not always; for *Auguſtus Caeſar*, *Titus Veſpaſianus*, *Philip le Belle* of *France*, *Edward* the fourth of *England*, *Alcibiades* of *Athens*, *Iſmael* the ſophy of *Perſia*, were all high and great ſpirits; and yet the moſt beautiful men of their times. In beauty, that of favour is more than that of colour; and that of decent and gracious motion more than that of favour. That is the beſt part of beauty, which a picture cannot expreſs; no nor the firſt ſight of the life. There is no excellent beauty, that hath not ſome ſtrangeneſs in the proportion. A man cannot tell, whether *Apelles*, or *Albert Durer*, were the more trifler; whereof the one would make a perſonage by geometrical proportions: the other, by taking the beſt parts out of divers faces, to make one excellent. Such perſonages, I think, would pleaſe no body but the painter that made them. Not but I think a painter may make a better face than ever was; but he muſt do it by a kind of felicity, (as a muſician that maketh an excellent air in muſick) and not by rule. A man ſhall ſee faces, that if you examine them part by part, you ſhall never find a good; and yet altogether do well. If it be true, that the principal part of beauty is in decent motion, certainly it is no marvel, though perſons in years ſeem many times more amiable; *pulchrorum autumnus pulcher:* for no youth can be comely but by pardon, and conſidering the youth, as to make up the comelineſs. Beauty is as ſummer-fruits, which are eaſy to corrupt, and cannot laſt: and for the moſt part, it makes a diſſolute youth, and an age a little out of countenance: but yet certainly again, if it light well, it maketh virtues ſhine, and vices bluſh.

## XLV. *Of deformity.*

DEFORMED perſons are commonly even with nature; for as nature hath done ill by them, ſo do they by nature; being for the moſt part (as the ſcripture ſaith) *void of natural affection*; and ſo they have their revenge of nature. Certainly there is a conſent between the body and the mind, and

where

where nature erreth in the one, ſhe ventureth in the other. *Ubi peccat in uno, periclitatur in altero.* But becauſe there is in man an election touching the frame of his mind, and a neceſſity in the frame of his body, the ſtars of natural inclination are ſometimes obſcured by the ſun of diſcipline and virtue: therefore it is good to conſider of deformity, not as a ſign which is more deceivable, but as a cauſe which ſeldom faileth of the effect. Whoſoever hath any thing fixed in his perſon that doth induce contempt, hath alſo a perpetual ſpur in himſelf, to reſcue and deliver himſelf from ſcorn; therefore all deformed perſons are extreme bold. Firſt, as in their own defence, as being expoſed to ſcorn; but in proceſs of time by a general habit. Alſo it ſtirreth in them induſtry, and eſpecially of this kind, to watch and obſerve the weakneſs of others, that they may have ſomewhat to repay. Again, in their ſuperiours, it quencheth jealouſy towards them, as perſons that they think they may at pleaſure deſpiſe: and it layeth their competitors and emulators aſleep; as never believing they ſhould be in poſſibility of advancement, till they ſee them in poſſeſſion. So that upon the matter in a great wit, deformity is an advantage to riſing. Kings in ancient times, (and at this preſent in ſome countries) were wont to put great truſt in eunuchs, becauſe they that are envious towards all, are more obnoxious and officious towards one. But yet their truſt towards them, hath rather been as to good ſpials, and good whiſperers, than good magiſtrates and officers. And much like is the reaſon of deformed perſons. Still the ground is, they will, if they be of ſpirit, ſeek to free themſelves from ſcorn; which muſt be either by virtue or malice. And therefore let it not be marvelled, if ſometimes they prove excellent perſons; as was *Ageſilaus*, *Zanger* the ſon of *Solomon*, *AEſop*, *Gaſca* preſident of *Perú*; and *Socrates* may go likewiſe amongſt them, with others.

## XLVI. *Of building.*

Houses are built to live in, and not to look on; therefore let uſe be preferred before uniformity, except where both may be had. Leave the goodly fabricks of houſes for beauty only, to the enchanted palaces of the poets: who build them with ſmall coſt. He that builds a fair houſe upon an ill ſeat, committeth himſelf to priſon. Neither do I reckon it an ill ſeat only, where the air is unwholeſome, but likewiſe where the air is unequal; as you ſhall ſee many fine ſeats, ſet upon a knap of ground, environed with higher hills round about it, whereby the heat of the ſun is pent in, and the wind gathereth as in troughs; ſo as you ſhall have, and that ſuddenly, as great diverſity of heat and cold, as if you dwelt in ſeveral places. Neither is it ill air only that maketh an ill ſeat; but ill ways, ill markets; and, if you will conſult with *Momus*, ill neighbours. I ſpeak not of many more; want of water, want of wood, ſhade, and ſhelter; want of fruitfulneſs, and mixture of grounds of ſeveral natures; want of proſpect; want of level grounds; want of places at ſome near diſtance, for ſports of hunting, hawking, and races; too near the ſea, too remote; having the commodity of navigable rivers, or the diſcommodity of their overflowing; too far off from great cities, which may hinder buſineſs; or too near them, which lurcheth all proviſions, and maketh every thing dear; where a man hath a great living laid together, and where he is ſcanted: all which, as it is impoſſible perhaps to find together, ſo it is good to know them, and think of them, that a man may take as many as he can: and if he have ſeveral dwellings, that he ſort them ſo, that what he wanteth in the one, he may find in the other. *Lucullus*

anſwered *Pompey* well, who when he ſaw his ſtately galleries and rooms, ſo large and lightſome in one of his houſes, ſaid, ſurely an excellent place for ſummer, but how do you in winter? *Lucullus* anſwered, why do you not think me as wiſe as ſome fowls are, that ever change their abode towards the winter?

To paſs from the ſeat to the houſe itſelf, we will do as *Cicero* doth in the orator's art, who writes books *De Oratore*, and a book he entitles *Orator:* whereof the former delivers the precepts of the art, and the latter the perfection. We will therefore deſcribe a princely palace, making a brief model thereof. For it is ſtrange to ſee, now in *Europe*, ſuch huge buildings as the *Vatican* and *Eſcurial*, and ſome others be, and yet ſcarce a very fair room in them.

First therefore I ſay you cannot have a perfect palace, except you have two ſeveral ſides; a ſide for the banquet, as is ſpoken of in the book of *Heſter*; and a ſide for the houſhold: the one for feaſts and triumphs, and the other for dwelling. I underſtand both theſe ſides to be not only returns, but parts of the front; and to be uniform without, though ſeverally partitioned within; and to be on both ſides of a great and ſtately tower, in the midſt of the front; that, as it were, joineth them together on either hand. I would have on the ſide of the banquet, in front, one only goodly room above ſtairs, of ſome forty foot high; and under it, a room for a dreſſing or preparing place, at times of triumphs. On the other ſide, which is the houſhold ſide, I wiſh it divided at the firſt into a hall and a chapel, (with a partition between,) both of good ſtate and bigneſs; and thoſe not to go all the length, but to have at the farther end a winter and a ſummer parlour, both fair: and under theſe rooms a fair and large cellar ſunk under ground; and likewiſe ſome privy kitchens, with butteries and pantries, and the like. As for the tower, I would have it two ſtories, of eighteen foot high a-piece, above the two wings; and goodly leads upon the top, raiſed with ſtatues interpoſed; and the ſame tower to be divided into rooms, as ſhall be thought fit. The ſtairs likewiſe to the upper rooms, let them be upon a fair open newel, and finely railed in, with images of wood, caſt into a braſs colour; and a very fair landing place at the top. But this to be, if you do not point any of the lower rooms for a dining-place of ſervants; for otherwiſe you ſhall have the ſervants dinner after your own; for the ſteam of it will come up as in a tunnel: and ſo much for the front. Only I underſtand the height of the firſt ſtairs to be ſixteen foot, which is the height of the lower room.

Beyond this front is there to be a fair court, but three ſides of it of a far lower building than the front. And in all the four corners of that court fair ſtair-caſes caſt into turrets on the outſide, and not within the row of buildings themſelves: but thoſe towers are not to be of the height of the front, but rather proportionable to the lower building. Let the court not be paved, for that ſtriketh up a great heat in ſummer, and much cold in winter: but only ſome ſide alleys, with a croſs, and the quarters to graze, being kept ſhorn, but not too near ſhorn. The row of return on the banquet ſide, let it be all ſtately galleries; in which galleries, let there be three, or five, fine cupola's, in the length of it, placed at equal diſtance; and fine coloured windows of ſeveral works. On the houſhold ſide, chambers of preſence, and ordinary entertainments, with ſome bed-chambers; and let all three ſides be a double houſe, without thorow lights on the ſides, that you may have rooms from the ſun, both for forenoon and afternoon. Caſt it

alſo, that you may have rooms both for ſummer and winter; ſhady for ſummer, and warm for winter. You ſhall have ſometimes fair houſes ſo full of glaſs, that one cannot tell where to become to be out of the ſun, or cold. For imbowed windows, I hold them of good uſe; (in cities indeed, upright do better, in reſpect of the uniformity towards the ſtreet;) for they be pretty retiring places for conference; and beſides, they keep both the wind and ſun off; for that which would ſtrike almoſt through the room, doth ſcarce paſs the window. But let them be but few, four in the court, on the ſides only.

Beyond this court, let there be an inward court of the ſame ſquare and height, which is to be environed with the garden on all ſides: and in the inſide, cloiſtered on all ſides, upon decent and beautiful arches, as high as the firſt ſtory: on the under ſtory, towards the garden, let it be turned to a grotto, or place of ſhade or eſtivation: and only have opening and windows towards the garden, and be level upon the floor, no whit ſunk under ground, to avoid all dampiſhneſs. And let there be a fountain, or ſome fair work of ſtatues, in the midſt of this court; and to be paved as the other court was. Theſe buildings to be for privy lodgings on both ſides, and the end for privy galleries: whereof you muſt foreſee, that one of them be for an infirmary, if the prince or any ſpecial perſon ſhould be ſick, with chambers, bed-chamber, *antecamera* and *recamera*, joining to it. This upon the ſecond ſtory. Upon the ground ſtory, a fair gallery, open, upon pillars; and upon the third ſtory likewiſe, an open gallery upon pillars, to take the proſpect and freſhneſs of the garden. At both corners of the farther ſide, by way of return, let there be two delicate or rich cabinets, daintily paved, richly hanged, glazed with cryſtalline glaſs, and a rich cupola in the midſt; and all other elegancy that may be thought upon. In the upper gallery too, I wiſh that there may be, if the place will yield it, ſome fountains running in divers places from the wall, with ſome fine avoidances. And thus much for the model of the palace; ſave that you muſt have, before you come to the front, three courts: a green court plain, with a wall about it: a ſecond court of the ſame, but more garniſhed, with little turrets, or rather embelliſhments upon the wall; and a third court, to make a ſquare with the front, but not to be built, nor yet encloſed with a naked wall, but encloſed with terraſſes leaded aloft, and fairly garniſhed on the three ſides; and cloiſter'd on the inſide with pillars, and not with arches below. As for offices, let them ſtand at diſtance, with ſome low galleries to paſs from them to the palace itſelf.

## XLVII. *Of gardens.*

God Almighty firſt planted a garden: and indeed it is the pureſt of human pleaſures. It is the greateſt refreſhment to the ſpirits of man; without which, buildings and palaces are but groſs handy-works: and a man ſhall ever ſee, that when ages grow to civility and elegancy, men come to build ſtately, ſooner than to garden finely; as if gardening were the greater perfection. I do hold it, in the royal ordering of gardens, there ought to be gardens for all the months in the year: in which, ſeverally, things of beauty may be then in ſeaſon. For *December* and *January*, and the latter part of *November*, you muſt take ſuch things as are green all winter; holly; ivy; bays; juniper; cypreſs trees; yew; pine-apple trees; fir trees; roſemary; lavender; periwinkle, the white, the purple, and the blue; germander; flags; orange trees; lemon trees, and myrtles, if they be ſtoved; and

and ſweet marjoram warm ſet. There followeth, for the latter part of *January* and *February*, the *mezereon* tree, which then bloſſoms; *crocus vernus*, both the yellow and the grey; primroſes; anemonies; the early tulip; *hyacinthus orientalis*; *chamairis*; *fritellaria*. For *March* there come violets, eſpecially the ſingle blue, which are the earlieſt; the yellow daffadil; the daiſy; the almond tree in bloſſom; the peach tree in bloſſom; the cornelian tree in bloſſom; ſweet-briar. In *April* follow the double white violet; the wall-flower; the ſtockgilliflower; the cowſlip, flower-de-luces, and lilies of all natures; roſemary-flowers; the tulip; the double piony; the pale daffadil; the *French* honeyſuckle; the cherry tree in bloſſom; the damaſcene and plumb trees in bloſſom; the white thorn in leaf; the lilach tree. In *May* and *June* come pinks of all ſorts; eſpecially the bluſh pink, roſes of all kinds, except the muſk, which comes later; honeyſuckles; ſtrawberries; bugloſs; columbine; the *French* marygold; *flos Africanus*; cherry tree in fruit; ribes; figs in fruit; raſps; vine flowers; lavender in flowers; the ſweet ſatyrian, with the white flower; *herba muſcaria*; *lilium convallium*; the apple tree in bloſſom. In *July* come gilliflowers of all varieties; muſk roſes; the lime tree in bloſſom; early pears, and plumbs in fruit, gennitings, codlins. In *Auguſt* come plumbs of all ſorts in fruit; pears; apricots, berberries; filberds, muſkmelons; monks-hoods, of all colours. In *September* come grapes; apples; poppey of all colours; peaches; *melo-cotones*: nectarines; cornelians; wardens; quinces. In *October*, and the beginning of *November*, come ſervices; medlars; bullaces; roſes cut or removed, to come late; holyoaks, and ſuch like. Theſe particulars are for the climate of *London*: but my meaning is perceived, that you may have *ver perpetuum*, as the place affords.

And becauſe the breath of flowers is far ſweeter in the air, (where it comes and goes, like the warbling of muſick,) than in the hand, therefore nothing is more fit for that delight, than to know what be the flowers and plants that do beſt perfume the air. Roſes damask and red, are faſt flowers of their ſmells; ſo that you may walk by a whole row of them, and find nothing of their ſweetneſs; yea, though it be in a morning's dew. Bays likewiſe yield no ſmell, as they grow; roſemary little; nor ſweet marjoram. That which above all others, yields the ſweeteſt ſmell in the air, is the violet; eſpecially the white double violet, which comes twice a year; about the middle of *April*, and about *Bartholomew*-tide. Next to that is the muſk-roſe; then the ſtrawberry leaves dying, with a moſt excellent cordial ſmell. Then the flower of the vines; it is a little duſt, like the duſt of a bent, which grows upon the cluſter, in the firſt coming forth: then ſweet-briar, then wall-flowers, which are very delightful, to be ſet under a parlour, or lower chamber window. Then pinks and gilliflowers, eſpecially the matted pink and clove-gilliflower: then the flowers of the lime tree: then the honeyſuckles, ſo they be ſomewhat afar off. Of bean-flowers I ſpeak not, becauſe they are field flowers: But thoſe which perfume the air moſt delightfully, not paſſed by as the reſt, but being trodden upon and cruſhed, are three: that is, burnet, wild thyme, and water mints. Therefore you are to ſet whole alleys of them, to have the pleaſure when you walk or tread.

For gardens, (ſpeaking of thoſe which are indeed prince-like, as we have done of buildings) the contents ought not well to be under thirty acres of ground, and to be divided into three parts; a green in the entrance; a heath or defert in the going forth! and the main garden in the midſt; beſides alleys on both ſides. And I like well, that four acres of ground be aſ-

ſigned

ſigned to the green, ſix to the heath, four and four to either ſide, and twelve to the main garden. The green hath two pleaſures; the one, becauſe nothing is more pleaſant to the eye, than green graſs kept finely ſhorn; the other, becauſe it will give you a fair alley in the midſt; by which you may go in front upon a ſtately hedge, which is to incloſe the garden. But becauſe the alley will be long, and in great heat of the year or day, you ought not to buy the ſhade in the garden, by going in the ſun through the green; therefore you are, of either ſide the green, to plant a covert alley, upon carpenter's work, about twelve foot in height, by which you may go in ſhade into the garden. As for the making of knots or figures, with divers coloured earths, that they may lie under the windows of the houſe, on that ſide which the garden ſtands, they be but toys; you may ſee as good ſights, many times, in tarts. The garden is beſt to be ſquare, encompaſſed on all the four ſides with a ſtately arched hedge: the arches to be upon pillars of carpenter's work, of ſome ten foot high, and ſix foot broad: and the ſpaces between, of the ſame dimenſion with the breadth of the arch. Over the arches, let there be an entire hedge, of ſome four foot high, framed alſo upon carpenter's work; and upon the upper hedge, over every arch, a little turret, with a belly enough to receive a cage of birds: and over every ſpace, between the arches, ſome other little figure, with broad plates of round colour'd glaſs, gilt, for the ſun to play upon. But this hedge I intend to be raiſed upon a bank, not ſteep, but gently ſlope, of ſome ſix foot, ſet all with flowers. Alſo I underſtand, that this ſquare of the garden ſhould not be the whole breadth of the ground, but to leave on either ſide ground enough for diverſity of ſide alleys; unto which, the two covert alleys of the green may deliver you: but there muſt be no alleys with hedges at either end of this great encloſure; not at the hither end, for letting your proſpect upon this fair hedge from the green; nor at the farther end, for letting your proſpect from the hedge, through the arches, upon the heath.

For the ordering of the ground within the great hedge, I leave it to variety of device; adviſing nevertheleſs, that whatſoever form you caſt it into, firſt it be not too buſy, or full of work: wherein I, for my part, do not like images cut out in juniper or other garden ſtuff; they be for children. Little low hedges round, like welts, with ſome pretty pyramids, I like well; and in ſome places, fair columns upon frames of carpenter's work. I would alſo have the alleys ſpacious and fair. You may have cloſer alleys upon the ſide grounds, but none in the main garden. I wiſh alſo, in the very middle, a fair mount, with three aſcents and alleys, enough for four to walk a-breaſt; which I would have to be perfect circles, without any bulwarks or emboſments; and the whole mount to be thirty foot high; and ſome fine banquetting houſe, with ſome chimneys neatly caſt, and without too much glaſs.

For fountains, they are a great beauty and refreſhment; but pools marr all, and make the garden unwholeſome, and full of flies and frogs. Fountains I intend to be of two natures: the one that ſprinkleth or ſpouteth water; the other a fair receipt of water, of ſome thirty or forty foot ſquare, but without fiſh, or ſlime, or mud. For the firſt, the ornaments of images gilt, or of marble, which are in uſe, do well: but the main matter is ſo to convey the water, as it never ſtay either in the bowls, or in the ciſtern; that the water be never by reſt diſcoloured, green or red, or the like; or gather any moſſineſs or putrefaction. Beſides that, it is to be cleanſed every

day

day by the hand. Alſo ſome ſteps up to it, and ſome fine pavement about it doth well. As for the other kind of fountain, which we may call a bathing pool, it may admit much curioſity and beauty, wherewith we will not trouble our ſelves; as, that the bottom be finely paved, and with images; the ſides likewiſe; and withal embelliſhed with coloured glaſs, and ſuch things of luſtre; encompaſſed alſo with fine rails of low ſtatues. But the main point is the ſame which we mentioned in the former kind of fountain; which is, that the water be in perpetual motion, fed by a water higher than the pool, and delivered into it by fair ſpouts, and then diſcharged away under ground by ſome equality of bores, that it ſtay little. And for fine devices of arching water without ſpilling, and making it riſe in ſeveral forms (of feathers, drinking glaſſes, canopies, and the like) they be pretty things to look on, but nothing to health and ſweetneſs.

For the heath, which was the third part of our plot, I wiſh it to be framed as much as may be to a natural wildneſs. Trees I would have none in it, but ſome thickets made only of ſweet-briar and honey-ſuckle, and ſome wild vine amongſt; and the ground ſet with violets, ſtraw-berries, and primroſes. For theſe are ſweet and proſper in the ſhade. And theſe to be in the heath here and there, not in any order. I like alſo little heaps, in the nature of mole-hills, (ſuch as are in wild heaths) to be ſet, ſome with wild thyme, ſome with pinks, ſome with germander, that gives a good flower to the eye, ſome with periwinkle, ſome with violets, ſome with ſtraw-berries, ſome with couſlips, ſome with daiſies, ſome with red roſes, ſome with *lilium convallium*, ſome with ſweet-williams red, ſome with bears-foot, and the like low flowers, being withal ſweet and ſightly. Part of which heaps to be with ſtandards of little buſhes, prickt upon their top, and part without. The ſtandards to be roſes, juniper, holly, berberries, (but here and there, becauſe of the ſmell of their bloſſom) red currans, gooſberries, roſemary, bays, ſweet briar, and ſuch like. But theſe ſtandards to be kept with cutting, that they grow not out of courſe.

For the ſide grounds, you are to fill them with variety of alleys, private, to give a full ſhade; ſome of them whereſoever the ſun be. You are to frame ſome of them likewiſe for ſhelter, that when the wind blows ſharp, you may walk as in a gallery. And thoſe alleys muſt be likewiſe hedged at both ends, to keep out the wind; and theſe cloſer alleys muſt be ever finely gravelled, and no graſs, becauſe of going wet. In many of theſe alleys likewiſe, you are to ſet fruit-trees of all ſorts; as well upon the walls as in ranges. And this would be generally obſerved, that the borders wherein you plant your fruit trees, be fair and large, and low, and not ſteep; and ſet with fine flowers, but thin and ſparingly, leſt they deceive the trees. At the end of both the ſide grounds, I would have a mount of ſome pretty height, leaving the wall of the incloſure breaſt high, to look abroad into the fields.

For the main garden, I do not deny but there ſhould be ſome fair alleys, ranged on both ſides with fruit-trees, and ſome pretty tufts of fruit-trees, and arbours with ſeats, ſet in ſome decent order; but theſe to be by no means ſet too thick, but to leave the main garden ſo as it be not cloſe, but the air open and free. For as for ſhade, I would have you reſt upon the alleys of the ſide grounds, there to walk, if you be diſpoſed, in the heat of the year or day; but to make account, that the main garden is for the more temperate parts of the year; and in the heat of ſummer, for the morning and the evening, or overcaſt days.

For

For aviaries, I like them not, except they be of that largeneſs, as they may be turffed, and have living plants and buſhes ſet in them; that the birds may have more ſcope, and natural neſtling, and that no foulneſs appear in the floor of the aviary. So I have made a platform of a princely garden, partly by precept, partly by drawing; not a model, but ſome general lines of it; and in this I have ſpared for no coſt. But it is nothing for great princes, that for the moſt part taking advice with workmen, with no leſs coſt, ſet their things together; and ſometimes add ſtatues, and ſuch things, for ſtate and magnificence, but nothing to the true pleaſure of a garden.

## XLVIII. *Of negotiating.*

It is generally better to deal by ſpeech, than by letter; and by the mediation of a third, than by a man's ſelf. Letters are good, when a man would draw an anſwer by letter back again; or when it may ſerve for a man's juſtification, afterwards to produce his own letter; or where it may be in danger to be interrupted, or heard by pieces. To deal in perſon is good, when a man's face breedeth regard, as commonly with inferiors; or in tender caſes, where a man's eye upon the countenance of him with whom he ſpeaketh, may give him a direction how far to go: and generally where a man will reſerve to himſelf liberty, either to diſavow, or to expound. In choice of inſtruments, it is better to chuſe men of a plainer ſort, that are like to do that that is committed to them, and to report back again faithfully the ſucceſs; than thoſe that are cunning to contrive out of other mens buſineſs, ſomewhat to grace themſelves; and will help the matter in report for ſatisfaction ſake. Uſe alſo ſuch perſons as affect the buſineſs wherein they are employed, for that quickneth much; and ſuch as are fit for the matter; as bold men for expoſtulation, fair-ſpoken men for perſuaſion, crafty men for inquiry and obſervation, froward and abſurd men for buſineſs that doth not well bear out it ſelf. Uſe alſo ſuch as have been lucky, and prevailed before in things wherein you have employed them; for that breeds confidence, and they will ſtrive to maintain their preſcription. It is better to ſound a perſon with whom one deals afar off, than to fall upon the point at firſt; except you mean to ſurprize him by ſome ſhort queſtion. It is better dealing with men in appetite, than with thoſe that are where they would be. If a man deal with another upon conditions, the ſtart of firſt performance is all; which a man cannot reaſonably demand, except either the nature of the thing be ſuch which muſt go before; or elſe a man can perſuade the other party, that he ſhall ſtill need him in ſome other thing; or elſe that he be counted the honeſter man. All practice is to diſcover, or to work. Men diſcover themſelves in truſt, in paſſion, at unawares, and of neceſſity, when they would have ſomewhat done, and cannot find an apt pretext. If you would work any man, you muſt either know his nature and faſhions, and ſo lead him; or his ends, and ſo perſuade him; or his weakneſs and diſadvantages, and ſo awe him; or thoſe that have intereſt in him, and ſo govern him. In dealing with cunning perſons, we muſt ever conſider their ends to interpret their ſpeeches; and it is good to ſay little to them, and that which they leaſt look for. In all negotiations of difficulty, a man may not look to ſow and reap at once; but muſt prepare buſineſs, and ſo ripen it by degrees.

## XLIX. *Of followers and friends.*

Costly followers are not to be liked; leſt while a man maketh his train longer, he make his wings ſhorter. I reckon to be coſtly, not them alone which charge the purſe, but which are weariſome and importune in ſuits. Ordinary followers ought to challenge no higher conditions than countenance, recommendation, and protection from wrongs. Factious followers are worſe to be liked, which follow not upon affection to him with whom they range themſelves, but upon diſcontentment conceived againſt ſome other: whereupon commonly enſueth that ill intelligence that we many times ſee between great perſonages. Likewiſe glorious followers, who make themſelves as trumpets of the commendation of thoſe they follow, are full of inconvenience; for they taint buſineſs through want of ſecrecy; and they export honour from a man, and make him a return in envy. There is a kind of followers likewiſe, which are dangerous, being indeed eſpials; which enquire the ſecrets of the houſe, and bear tales of them to others. Yet ſuch men many times are in great favour; for they are officious, and commonly exchange tales. The following by certain eſtates of men anſwerable to that which a great perſon himſelf profeſſeth, (as of ſoldiers to him that hath been employed in the wars, and the like) hath ever been a thing civil, and well taken even in monarchies; ſo it be without too much pomp or popularity. But the moſt honourable kind of following, is to be followed as one that apprehendeth to advance virtue and deſert in all ſorts of perſons. And yet where there is no eminent odds in ſufficiency, it is better to take with the more paſſable, than with the more able. And beſides, to ſpeak truth in baſe times, active men are of more uſe than virtuous. It is true, that in government, it is good to uſe men of one rank equally: for to countenance ſome extraordinarily, is to make them inſolent, and the reſt diſcontent; becauſe they may claim a due. But contrariwiſe in favour, to uſe men with much difference and election is good; for it maketh the perſons preferred more thankful, and the reſt more officious; becauſe all is of favour. It is good diſcretion not to make too much of any man at the firſt; becauſe one cannot hold out that proportion. To be governed (as we call it) by one, is not ſafe; for it ſhews ſoftneſs, and gives a freedom to ſcandal and diſreputation; for thoſe that would not cenſure, or ſpeak ill of a man immediately, will talk more boldly of thoſe that are ſo great with them, and thereby wound their honour. Yet to be diſtracted with many is worſe; for it makes men to be of the laſt impreſſion, and full of change. To take advice of ſome few friends is ever honourable; for lookers on many times ſee more than gameſters; and the vale beſt diſcovereth the hill. There is little friendſhip in the world, and leaſt of all between equals, which was wont to be magnified. That that is, is between ſuperiour and inferiour, whoſe fortunes may comprehend, the one the other.

## L. *Of ſuitors.*

Many ill matters and projects are undertaken; and private ſuits do putrefy the publick good. Many good matters are undertaken with bad minds; I mean not only corrupt minds, but crafty minds, that intend not performance. Some embrace ſuits, which never mean to deal effectually in them; but if they ſee there may be life in the matter by ſome other mean, they will be content to win a thank, or take a ſecond reward, or at leaſt

to make uſe in the mean time of the ſuitor's hopes. Some take hold of ſuits, only for an occaſion to croſs ſome other; or to make an information, whereof they could not otherwiſe have apt pretext; without care what become of the ſuit when that turn is ſerved: or generally, to make other mens buſineſs a kind of entertainment to bring in their own. Nay, ſome undertake ſuits, with a full purpoſe to let them fall; to the end to gratify the adverſe party or competitor. Surely there is in ſome ſort a right in every ſuit; either a right of equity, if it be a ſuit of controverſy; or a right of deſert, if it be a ſuit of petition. If affection lead a man to favour the wrong ſide in juſtice, let him rather uſe his countenance to compound the matter, than to carry it. If affection lead a man to favour the leſs worthy in deſert, let him do it without depraving or diſabling the better deſerver. In ſuits which a man doth not well underſtand, it is good to refer them to ſome friend of truſt and judgment, that may report whether he may deal in them with honour; but let him chuſe well his referendaries, for elſe he may be led by the noſe. Suitors are ſo diſtaſted with delays and abuſes, that plain dealing in denying to deal in ſuits at firſt, and reporting the ſucceſs barely, and in challenging no more thanks than one hath deſerved, is grown not only honourable, but alſo gracious. In ſuits of favour, the firſt coming ought to take little place; ſo far forth conſideration may be had of his truſt, that if intelligence of the matter could not otherwiſe have been had but by him, advantage be not taken of the note, but the party left to his other means; and in ſome ſort recompenſed for his diſcovery. To be ignorant of the value of a ſuit is ſimplicity; as well as to be ignorant of the right thereof, is want of conſcience. Secrecy in ſuits is a great mean of obtaining; for voicing them to be in forwardneſs, may diſcourage ſome kind of ſuitors; but doth quicken and awake others. But timing of the ſuit is the principal: Timing, I ſay, not only in reſpect of the perſon that ſhould grant it, but in reſpect of thoſe which are like to croſs it. Let a man in the choice of his mean, rather chuſe the fitteſt mean, than the greateſt mean: and rather them that deal in certain things, than thoſe that are general. The reparation of a denial, is ſometimes equal to the firſt grant; if a man ſhew himſelf neither dejected nor diſcontented. *Iniquum petas, ut aequum feras*; is a good rule, where a man hath ſtrength of favour: but otherwiſe a man were better riſe in his ſuit; for he that would have ventured at firſt to have loſt the ſuitor, will not in the concluſion loſe both the ſuitor and his own former favour. Nothing is thought ſo eaſy a requeſt to a great perſon, as his letter; and yet, if it be not in a good cauſe, it is ſo much out of his reputation. There are no worſe inſtruments than theſe general contrivers of ſuits; for they are but a kind of poiſon and infection to publick proceedings.

## LI. *Of ſtudies.*

STUDIES ſerve for delight, for ornament, and for ability. Their chief uſe for delight, is in privateneſs and retiring; for ornament, is in diſcourſe; and for ability, is in the judgment and diſpoſition of buſineſs. For expert men can execute, and perhaps judge of particulars, one by one; but the general counſels, and the plots and marſhalling of affairs, come beſt from thoſe that are learned. To ſpend too much time in ſtudies, is ſloth; to uſe them too much for ornament, is affectation; to make judgment wholly by their rules, is the humour of a ſcholar. They perfect nature, and are perfected by experience: for natural abilities are like natural plants, that need pruning by

ſtudy; and ſtudies themſelves do give forth directions too much at large, except they be bounded in by experience. Crafty men contemn ſtudies; ſimple men admire them, and wiſe men uſe them; for they teach not their own uſe; but that is a wiſdom without them, and above them, won by obſervation. Read not to contradict and confute; nor to believe and take for granted; nor to find talk and diſcourſe; but to weigh and conſider. Some books are to be taſted, others to be ſwallowed, and ſome few to be chewed and digeſted: that is, ſome books are to be read only in parts; others to be read, but not curiouſly; and ſome few to be read wholly, and with diligence and attention. Some books alſo may be read by deputy, and extracts made of them by others; but that would be only in the leſs important arguments, and the meaner ſort of books: elſe diſtilled books are like common diſtilled waters, flaſhy things. Reading maketh a full man; conference a ready man; and writing an exact man. And therefore if a man write little, he had need have a great memory; if he confer little, he had need have a preſent wit; and if he read little, he had need have much cunning, to ſeem to know that he doth not. Hiſtories make men wiſe; poets witty; the mathematick ſubtile; natural philoſophy deep; moral, grave; logick and rhetorick, able to contend: *Abeunt ſtudia in mores.* Nay, there is no ſtond or impediment in the wit, but may be wrought out by fit ſtudies; like as diſeaſes of the body may have appropriate exerciſes: bowling is good for the ſtone and reins; ſhooting for the lungs and breaſt; gentle walking for the ſtomach; riding for the head; and the like. So if a man's wit be wandering, let him ſtudy the mathematicks; for in demonſtrations, if his wit be called away never ſo little, he muſt begin again: if his wit be not apt to diſtinguiſh or find differences, let him ſtudy the ſchoolmen; for they are *Cymini ſectores.* If he be not apt to beat over matters, and to call up one thing, to prove and illuſtrate another, let him ſtudy the lawyers caſes: ſo every defect of the mind may have a ſpecial receipt.

## LII. *Of faction.*

MANY have an opinion not wiſe; that for a prince to govern his eſtate; or for a great perſon to govern his proceedings, according to the reſpect of factions, is a principal part of policy; whereas contrariwiſe, the chiefeſt wiſdom is, either in ordering thoſe things which are general, and wherein men of ſeveral factions do nevertheleſs agree, or in dealing with correſpondence to particular perſons, one by one. But I ſay not, that the conſideration of factions is to be neglected. Mean men, in their riſing, muſt adhere; but great men, that have ſtrength in themſelves, were better to maintain themſelves indifferent and neutral. Yet even in beginners, to adhere ſo moderately, as he be a man of the one faction, which is moſt paſſable with the other, commonly giveth beſt way. The lower and weaker faction is the firmer in conjunction: and it is often ſeen, that a few that are ſtiff, do tire out a greater number that are more moderate. When one of the factions is extinguiſhed, the remaining ſubdivideth: as the faction between *Lucullus*, and the reſt of the nobles of the ſenate (which they called *optimates*) held out a while againſt the faction of *Pompey* and *Caeſar*: But when the ſenate's authority was pulled down, *Caeſar* and *Pompey* ſoon after brake. The faction or party of *Antonius* and *Octavianus Caeſar*, againſt *Brutus* and *Caſſius*, held out likewiſe for a time: but when *Brutus* and *Caſſius* were overthrown, then ſoon after *Antonius* and *Octavianus* brake and ſubdivided. Theſe examples are of wars, but the ſame holdeth in private factions.

factions. And therefore thoſe that are ſeconds in factions, do many times, when the faction ſubdivideth, prove principals; but many times alſo they prove cyphers and caſheer'd; for many a man's ſtrength is in oppoſition; and when that faileth, he groweth out of uſe. It is commonly ſeen, that men once placed, take in with the contrary faction to that, by which they enter: thinking belike that they have the firſt ſure, and now are ready for a new purchaſe. The traitor in faction lightly goeth away with it; for when matters have ſtuck long in balancing, the winning of ſome one man caſteth them, and he getteth all the thanks. The even carriage between two factions, proceedeth not always of moderation, but of a trueneſs to a man's ſelf, with end to make uſe of both. Certainly in *Italy* they hold it a little ſuſpect in popes, when they have often in their mouth *Padre commune:* and take it to be a ſign of one, that meaneth to refer all to the greatneſs of his own houſe. Kings had need beware how they ſide themſelves, and make themſelves as of a faction or party; for leagues within the ſtate are ever pernicious to monarchies; for they raiſe an obligation, paramount to obligation of ſovereignty, and make the king, *tanquam unus ex nobis*; as was to be ſeen in the league of *France*. When factions are carried too high, and too violently, it is a ſign of weakneſs in princes, and much to the prejudice both of their authority and buſineſs. The motions of factions, under kings, ought to be like the motions (as the aſtronomers ſpeak) of the inferior orbs; which may have their proper motions, but yet ſtill are quietly carried by the higher motion of *primum mobile*.

## LIII. *Of ceremonies and reſpects.*

He that is only real, had need have exceeding great parts of virtue; as the ſtone had need to be rich, that is ſet without foil: but if a man mark it well, it is in praiſe and commendation of men, as it is in gettings and gains. For the proverb is true, that light gains make heavy purſes; for light gains come thick, whereas great come but now and then. So it is true, that ſmall matters win great commendation, becauſe they are continually in uſe, and in note; whereas the occaſion of any great virtue cometh but on feſtivals: therefore it doth much add to a man's reputation, and is, (as queen *Iſabella* ſaid) like perpetual letters commendatory, to have good forms: to attain them, it almoſt ſufficeth not to deſpiſe them: for ſo ſhall a man obſerve them in others; and let him truſt himſelf with the reſt. For if he labour too much to expreſs them, he ſhall loſe their grace; which is to be natural and unaffected. Some mens behaviour is like a verſe, wherein every ſyllable is meaſured: how can a man comprehend great matters, that breaketh his mind too much to ſmall obſervations? Not to uſe ceremonies at all, is to teach others not to uſe them again; and ſo diminiſheth reſpect to himſelf; eſpecially they be not to be omitted to ſtrangers, and formal natures: but the dwelling upon them, and exalting them above the moon, is not only tedious, but doth diminiſh the faith and credit of him that ſpeaks. And certainly there is a kind of conveying of effectual and imprinting paſſages, amongſt complements, which is of ſingular uſe, if a man can hit upon it. Amongſt a man's peers, a man ſhall be ſure of familiarity; and therefore it is good a little to keep ſtate. Amongſt a man's inferiors, one ſhall be ſure of reverence; and therefore it is good a little to be familiar. He that is too much in any thing, ſo that he giveth another occaſion of ſociety, maketh himſelf cheap. To apply one's ſelf to others is good; ſo it be with demonſtration, that a man doth it upon regard, and not upon facility.

lity. It is a good precept, generally in ſeconding another, yet to add ſomewhat of one's own; as if you will grant his opinion, let it be with ſome diſtinction; if you will follow his motion, let it be with condition; if you allow his counſel, let it be with alleging farther reaſon. Men had need beware how they be too perfect in complements; for be they never ſo ſufficient otherwiſe, their enviers will be ſure to give them that attribute, to the diſadvantage of their greater virtues. It is loſs alſo in buſineſs, to be too full of reſpects, or to be too curious in obſerving times and opportunities: *Solomon* ſaith; *He that conſidereth the wind, ſhall not ſow*; *and he that looketh to the clouds, ſhall not reap.* A wiſe man will make more opportunities than he finds. Mens behaviour ſhould be like their apparel; not too ſtraight or point device, but free for exerciſe or motion.

## LIV. *Of praiſe.*

Praise is the reflection of virtue: but it is as the glaſs or body, which giveth the reflection. If it be from the common people, it is commonly falſe and nought; and rather followeth vain perſons, than virtuous; for the common people underſtand not many excellent virtues: the loweſt virtues draw praiſe from them; the middle virtues work in them aſtoniſhment, or admiration; but of the higheſt virtues, they have no ſenſe or perceiving at all: but ſhews, and *ſpecies virtutibus ſimiles*, ſerve beſt with them. Certainly fame is like a river, that beareth up things light and ſwoln, and drowns things weighty and ſolid: but if perſons of quality and judgment concur, then it is (as the ſcripture ſaith) *Nomen bonum inſtar unguenti fragrantis.* It filleth all round about, and will not eaſily away: for the odours of ointments, are more durable than thoſe of flowers. There be ſo many falſe points of praiſe, that a man may juſtly hold it a ſuſpect. Some praiſes proceed merely of flattery; and if he be an ordinary flatterer, he will have certain common attributes, which may ſerve every man; if he be a cunning flatterer, he will follow the arch-flatterer, which is a man's ſelf; and wherein a man thinketh beſt of himſelf, therein the flatterer will uphold him moſt: but if he be an impudent flatterer, look wherein a man is conſcious to himſelf, that he is moſt defective, and is moſt out of countenance in himſelf, that will the flatterer entitle him to perforce, *ſpreta conſcientia.* Some praiſes come of good wiſhes and reſpects, which is a form due in civility to kings and great perſons, *laudando praecipere*; when by telling men what they are, they repreſent to them what they ſhould be. Some men are praiſed maliciouſly to their hurt, thereby to ſtir envy and jealouſy towards them; *peſſimum genus inimicorum laudantium*; inſomuch as it was a proverb amongſt the *Grecians*, that, he that was praiſed to his hurt, ſhould have a puſh riſe upon his noſe: as we ſay, that a bliſter will riſe upon one's tongue, that tells a lye. Certainly moderate praiſe, uſed with opportunity, and not vulgar, is that which doth the good. *Solomon* ſaith, *he that praiſeth his friend aloud, riſing early, it ſhall be to him no better than a curſe.* Too much magnifying of man or matter, doth irritate contradiction, and procure envy and ſcorn. To praiſe a man's ſelf cannot be decent, except it be in rare caſes: but to praiſe a man's office or profeſſion, he may do it with good grace, and with a kind of magnanimity. The cardinals of *Rome*, which are theologues, and friers, and ſchoolmen, have a phraſe of notable contempt and ſcorn, towards civil buſineſs; for they call all temporal buſineſs, of wars, embaſſages, judicature, and other employments, ſhirrerie, which is under-ſheriffries, as if they were but matters for under-ſheriffs and catchpoles; though many times thoſe under-

ſheriffries

ſheriffries do more good than their high ſpeculations. St. *Paul*, when he boaſts of himſelf, he doth oft interlace, *I ſpeak like a fool*; but ſpeaking of his calling, he ſaith, *magnificabo apoſtolatum meum.*

## LV. *Of vain-glory.*

It was prettily deviſed of *AEſop:* The fly ſate upon the axle-tree of the chariot wheel, and ſaid, what a duſt do I raiſe? So are there ſome vain perſons, that whatſoever goeth alone, or moveth upon greater means, if they have never ſo little hand in it, they think it is they that carry it. They that are glorious, muſt needs be factious; for all bravery ſtands upon compariſons. They muſt needs be violent, to make good their own vaunts: neither can they be ſecret, and therefore not effectual; but according to the *French* proverb, *beaucoup de bruit, peu de fruit:* much brute, little fruit. Yet certainly there is uſe of this quality in civil affairs: where there is an opinion, and fame to be created, either of virtue or greatneſs, theſe men are good trumpeters. Again, as *Titus Livius* noteth, in the caſe of *Antiochus* and the *AEtolians*, there are ſometimes great effects of croſs lyes; as if a man that negotiates between two princes, to draw them to join in a war againſt the third, doth extol the forces of either of them, above meaſure, the one to the other; and ſometimes, he that deals between man and man, raiſeth his own credit with both, by pretending greater intereſt than he hath in either. And in theſe, and the like kinds, it often falls out, that ſomewhat is produced of nothing; for lyes are ſufficient to breed opinion, and opinion brings on ſubſtance. In military commanders and ſoldiers, vain-glory is an eſſential point; for as iron ſharpens iron, ſo by glory one courage ſharpeneth another: In caſes of great enterprize, upon charge and adventure, a compoſition of glorious natures doth put life into buſineſs; and thoſe that are of ſolid and ſober natures, have more of the ballaſt than of the ſail. In fame of learning, the flight will be ſlow, without ſome feathers of oſtentation: *Qui de contemnenda gloria libros ſcribunt, nomen ſuum inſcribunt. Socrates, Ariſtotle, Galen*, were men full of oſtentation. Certainly vain-glory helpeth to perpetuate a man's memory; and virtue was never ſo beholden to human nature, as it received its due at the ſecond hand. Neither had the fame of *Cicero, Seneca, Plinius ſecundus*, born her age ſo well, if it had not been joined with ſome vanity in themſelves: like unto varniſh, that makes cielings not only ſhine, but laſt. But all this while, when I ſpeak of vain-glory, I mean not of that property that *Tacitus* doth attribute to *Mucianus*; *omnium, quae dixerat, feceratque, arte quadam oſtentator:* for that proceeds not of vanity, but of natural magnanimity and diſcretion: and in ſome perſons, is not only comely, but gracious. For excuſations, ceſſions, modeſty it ſelf well governed, are but arts of oſtentation. And amongſt thoſe arts there is none better, than that which *Plinius ſecundus* ſpeaketh of; which is to be liberal of praiſe and commendation to others, in that wherein a man's ſelf hath any perfection. For ſaith *Pliny* very wittily; in commending another, you do your ſelf right; for he that you commend is either ſuperior to you, in that you commend, or inferior. If he be inferior, if he be to be commended, you much more. If he be ſuperior, if he be not to be commended, you much leſs glorious. Men are the ſcorn of wiſe men; the admiration of fools; the idols of paraſites; and the ſlaves of their own vaunts.

## LVI. *Of honour and reputation.*

THE winning of honour is but the revealing of a man's virtue and worth, without diſadvantage. For ſome in their actions do woo and affect honour and reputation; which ſort of men are commonly much talked of, but inwardly little admired. And ſome, contrariwiſe, darken their virtue in the ſhew of it; ſo as they be undervalued in opinion. If a man perform that which hath not been attempted before, or attempted and given over; or hath been atchieved, but not with ſo good circumſtance; he ſhall purchaſe more honour, than by effecting a matter of greater difficulty, or virtue, wherein he is but a follower. If a man ſo temper his actions, as in ſome one of them he doth content every faction or combination of people, the muſick will be the fuller. A man is an ill huſband of his honour, that entereth into any action, the failing wherein may diſgrace him more, than the carrying of it through can honour him. Honour that is gained and broken upon another, hath the quickeſt reflection, like diamonds cut with faſcets. And therefore let a man contend to excel any competitors of his in honour, in out-ſhooting them, if he can, in their own bow. Diſcreet followers and ſervants help much to reputation: *omnis fama a domeſticis emanat.* Envy, which is the canker of honour, is beſt extinguiſhed, by declaring a man's ſelf in his ends, rather to ſeek merit than fame; and by attributing a man's ſucceſſes rather to divine providence and felicity, than to his own virtue or policy. The true marſhalling of the degrees of ſovereign honour, are theſe. In the firſt place are *conditores imperiorum*; founders of ſtates and commonwealths; ſuch as were *Romulus, Cyrus, Caeſar, Ottoman, Iſmael.* In the ſecond place are *legiſlatores*, law-givers, which are alſo called ſecond founders, or *perpetui principes*, becauſe they govern by their ordinances, after they are gone: ſuch were *Lycurgus, Solon, Juſtinian, Edgar, Alphonſus* of *Caſtile*, the wiſe, that made the *Siete patridas.* In the third place are *liberatores*, or *ſalvatores*; ſuch as compound the long miſeries of civil wars, or deliver their countries from ſervitude of ſtrangers or tyrants; as *Auguſtus Caeſar, Veſpaſianus, Aurelianus, Theodoricus*, king *Henry* the ſeventh of *England*, king *Henry* the fourth of *France.* In the fourth place are *propagatores*, or *propugnatores imperii*, ſuch as in honourable wars enlarge their territories, or make noble defence againſt invaders. And in the laſt place, are *patres patriae*, which reign juſtly, and make the times good, wherein they live. Both which laſt kinds need no examples, they are in ſuch number. Degrees of honour in ſubjects are; firſt, *participes curarum*, thoſe upon whom princes do diſcharge the greateſt weight of their affairs; their right hands, as we call them. The next are, *duces belli*, great leaders; ſuch as are princes lieutenants, and do them notable ſervices in the wars. The third are *gratioſi*, favourites; ſuch as exceed not this ſcantling; to be ſolace to the ſovereign, and harmleſs to the people: and the fourth, *negotiis pares*; ſuch as have great places under princes, and execute their places with ſufficiency. There is an honour likewiſe, which may be ranked amongſt the greateſt, which happeneth rarely. That is, of ſuch as ſacrifice themſelves to death or danger, for the good of their countrey; as was *M. Regulus*, and the two *Decii.*

## LVII. *Of judicature.*

JUDGES ought to remember, that their office is *jus dicere*, and not *jus dare*; to interpret law, and not to make law, or give law. Elſe will it be

like the authority claimed by the church of *Rome*; which under pretext of expoſition of ſcripture, doth not ſtick to add and alter; and to pronounce that which they do not find; and by ſhew of antiquity to introduce novelty. Judges ought to be more learned than witty; more reverend than plauſible; and more adviſed than confident. Above all things, integrity is their portion and proper virtue. *Curſed* (ſaith the law) *is he that removeth the land-mark.* The miſlayer of a mere-ſtone is to blame: But it is the unjuſt judge that is the capital remover of land-marks, when he defineth amiſs of lands and property. One foul ſentence doth more hurt, than many foul examples. For theſe do but corrupt the ſtream; the other corrupteth the fountain. So ſaith *Solomon*; *fons turbatus, & vena corrupta, eſt juſtus cadens in cauſa ſua coram adverſario.* The office of judges may have reference unto the parties that ſue, unto the advocates that plead; unto the clerks and miniſters of juſtice underneath them, and to the ſovereign or ſtate above them.

First, for the cauſes or parties that ſue. *There be* (ſaith the ſcripture) *that turn judgment into wormwood*; and ſurely there be alſo that turn it into vinegar: for injuſtice maketh it bitter, and delays make it ſour. The principal duty of a judge, is to ſuppreſs force and fraud; whereof force is the more pernicious when it is open; and fraud when it is cloſe and diſguiſed. Add thereto contentious ſuits, which ought to be ſpewed out as the ſurfeit of courts. A judge ought to prepare his way to a juſt ſentence, as God uſeth to prepare his way by raiſing valleys, and taking down hills: ſo when there appeareth on either ſide an high hand, violent proſecution, cunning advantages taken, combination, power, great counſel, then is the virtue of a judge ſeen, to make inequality equal; that he may plant his judgment as upon an even ground. *Qui fortiter emungit, elicit ſanguinem*; and where the wine-preſs is hard wrought, it yields a harſh wine that taſtes of the grape-ſtone. Judges muſt beware of hard conſtructions, and ſtrained inferences; for there is no worſe torture than the torture of laws: eſpecially in caſe of laws penal, they ought to have care, that that which was meant for terror, be not turned into rigour; and that they bring not upon the people that ſhower whereof the ſcripture ſpeaketh, *pluet ſuper eos laqueos:* for penal laws preſſed, are a ſhower of ſnares upon the people. Therefore let penal laws, if they have been ſleepers of long, or if they be grown unfit for the preſent time, be by wiſe judges confined in the execution; *judicis officium eſt, ut res, ita tempora rerum, &c.* In cauſes of life and death, judges ought (as far as the law permitteth) in juſtice to remember mercy; and to caſt a ſevére eye upon the example, but a merciful eye upon the perſon.

Secondly, for the advocates and counſel that plead: patience and gravity of hearing is an eſſential part of juſtice; and an over-ſpeaking judge is no well-tuned cymbal. It is no grace to a judge, firſt to find that which he might have heard in due time from the bar; or to ſhew quickneſs of conceit in cutting off evidence or counſel too ſhort; or to prevent information by queſtions, though pertinent. The parts of a judge in hearing are four; to direct the evidence; to moderate length, repetition, or impertinency of ſpeech; to recapitulate, ſelect, and collate, the material points of that which hath been ſaid; and to give the rule or ſentence. Whatſoever is above theſe, is too much; and proceedeth either of glory and willingneſs to ſpeak, or of impatience to hear, or of ſhortneſs of memory, or of want of a ſtayed and equal attention. It is a ſtrange thing to ſee, that the boldneſs of advocates

ſhould prevail with judges; whereas they ſhould imitate God in whoſe ſeat they ſit; who repreſſeth the preſumptuous, and giveth grace to the modeſt. But it is more ſtrange, that judges ſhould have noted favourites, which cannot but cauſe multiplication of fees, and ſuſpicion of by-ways. There is due from the judge to the advocate, ſome commendation and gracing where cauſes are well handled, and fair pleaded; eſpecially towards the ſide which obtaineth not; for that upholds in the client the reputation of his counſel, and beats down in him the conceit of his cauſe. There is likewiſe due to the publick a civil reprehenſion of advocates, where there appeareth cunning counſel, groſs neglect, ſlight information, indiſcreet preſſing, or an over-bold defence. And let not the counſel at the bar chop with the judge, nor wind himſelf into the handling of the cauſe anew, after the judge hath declared his ſentence: but on the other ſide, let not the judge meet the cauſe half way; nor give occaſion to the party to ſay, his counſel or proofs were not heard.

THIRDLY, for that that concerns clerks and miniſters. The place of juſtice is an hallowed place; and therefore not only the bench, but the footpace and precincts, and purpriſe thereof, ought to be preſerved without ſcandal and corruption. For certainly, *grapes* (as the ſcripture ſaith) *will not be gathered of thorns or thiſtles:* neither can juſtice yield her fruit with ſweetneſs, amongſt the briars and brambles of catching and polling clerks and miniſters. The attendants of courts are ſubject to four bad inſtruments. Firſt, certain perſons that are ſowers of ſuits; which make the court ſwell, and the countrey pine. The ſecond ſort, is of thoſe that engage courts in quarrels of juriſdiction, and are not truly *amici curiae*, but *paraſiti curiae*; in puffing a court up beyond her bounds, for their own ſcraps and advantage. The third ſort, is of thoſe that may be accounted the left hands of courts; perſons that are full of nimble and ſiniſter tricks and ſhifts, whereby they pervert the plain and direct courſes of courts, and bring juſtice into oblique lines and labyrinths. And the fourth is, the poller and exacter of fees; which juſtifies the common reſemblance of the courts of juſtice to the buſh, whereunto while the ſheep flies for defence in weather, he is ſure to loſe part of the fleece. On the other ſide, an ancient clerk, ſkilful in precedents, wary in proceeding, and underſtanding in the buſineſs of the court, is an excellent finger of a court, and doth many times point the way to the judge himſelf.

FOURTHLY, for that which may concern the ſovereign and eſtate. Judges ought above all to remember the concluſion of the *Roman* twelve tables; *ſalus populi ſuprema lex*; and to know that laws, except they be in order to that end, are but things captious, and oracles not well inſpired. Therefore it is an happy thing in a ſtate, when kings and ſtates do often conſult with judges; and again, when judges do often conſult with the king and ſtate: the one, when there is matter of law intervenient in buſineſs of ſtate; the other, when there is ſome conſideration of ſtate, intervenient in matter of law. For many times, the things deduced to judgment may be *meum* and *tuum*, when the reaſon and conſequence thereof may trench to point of eſtate: I call matter of eſtate, not only the parts of ſovereignty, but whatſoever introduceth any great alteration, or dangerous precedent; or concerneth manifeſtly any great portion of people. And let no man weakly conceive, that juſt laws, and true policy, have any antipathy; for they are like the ſpirits and ſinews, that one moves with the other. Let judges alſo remember, that *Solomon*'s throne was ſupported by lions on both ſides;

let

let them be lions, but yet lions under the throne; being circumſpect that they do not check or oppoſe any points of ſovereignty. Let not judges alſo be ſo ignorant of their own right, as to think there is not left to them as a principal part of their office, a wiſe uſe and application of laws. For they may remember what the Apoſtle ſaith of a greater law than theirs; *Nos ſcimus quia lex bona eſt, modo quis ea utatur legitime.*

## LVIII. *Of anger.*

To ſeek to extinguiſh anger utterly, is but a bravery of the Stoicks. We have better oracles: *Be angry, but ſin not. Let not the ſun go down upon your anger.* Anger muſt be limited and confined, both in race and in time. We will firſt ſpeak, how the natural inclination and habit, *to be angry*, may be attempted and calmed. Secondly, how the particular motions of anger may be repreſſed, or at leaſt refrained from doing miſchief. Thirdly, how to raiſe anger, or appeaſe anger in another.

For the firſt, there is no other way but to meditate and ruminate well upon the effects of anger, how it troubles man's life. And the beſt time to do this, is to look back upon anger when the fit is throughly over. *Seneca* ſaith well; that anger is like rain, which breaks it ſelf upon that it falls. The ſcripture exhorteth us, *to poſſeſs our ſouls in patience.* Whoſoever is out of patience, is out of poſſeſſion of his ſoul. Men muſt not turn bees;

———*Animaſque in vulnere ponunt.*

Anger is certainly a kind of baſeneſs; as it appears well in the weakneſs of thoſe ſubjects in whom it reigns; children, women, old folks, ſick folks. Only men muſt beware, that they carry their anger rather with ſcorn than with fear; ſo that they may ſeem rather to be above the injury than below it. Which is a thing eaſily done, if a man will give law to himſelf in it.

For the ſecond point, the cauſes and motives of anger are chiefly three. Firſt, to be too ſenſible of hurt; for no man is angry that feels not himſelf hurt: and therefore tender and delicate perſons muſt needs be oft angry. They have ſo many things to trouble them, which more robuſt natures have little ſenſe of. The next is, the apprehenſion and conſtruction of the injury offered to be, in the circumſtances thereof, full of contempt. For contempt is that which putteth an edge upon anger, as much or more than the hurt it ſelf. And therefore when men are ingenious in picking out circumſtances of contempt, they do kindle their anger much. Laſtly, opinion of the touch of a man's reputation, doth multiply and ſharpen anger. Wherein the remedy is, that a man ſhould have, as *Conſalvo* was wont to ſay, *telam honoris craſſiorem.* But in all refrainings of anger, it is the beſt remedy to win time; and to make a man's ſelf believe, that the opportunity of his revenge is not yet come: but that he foreſees a time for it, and ſo to ſtill himſelf in the mean time, and reſerve it.

To contain anger from miſchief, though it take hold of a man, there be two things whereof you muſt have ſpecial caution. The one, of extreme bitterneſs of words, eſpecially if they be aculeate and proper: for *communia maledicta* are nothing ſo much: and again, that in anger a man reveal no ſecrets; for that makes him not fit for ſociety. The other, that you do not peremptorily break off, in any buſineſs, in a fit of anger: but howſoever you ſhew bitterneſs, do not act any thing that is not revocable.

For raiſing and appeaſing anger in another; it is done chiefly by chuſing of times. When men are frowardeſt and worſt diſpoſed, to incenſe

them. Again, by gathering (as was touched before) all that you can find out to aggravate the contempt: and the two remedies are by the contraries. The former to take good times, when firſt to relate to a man an angry buſineſs: for the firſt impreſſion is much. And the other is, to ſever, as much as may be, the conſtruction of the injury, from the point of contempt: imputing it to miſunderſtanding, fear, paſſion, or what you will.

## LIX. *Of viciſſitude of things.*

Solomon ſaith, *there is no new thing upon the earth:* So that as *Plato* had an imagination, that all knowledge was but remembrance; ſo *Solomon* giveth his ſentence, *that all novelty is but oblivion.* Whereby you may ſee, that the river of *Lethe* runneth as well above ground, as below. There is an abſtruſe aſtrologer, that ſaith, if it were not for two things that are conſtant; (the one is, that the fixed ſtars ever ſtand at like diſtance one from another, and never come nearer together, nor go farther aſunder: the other, that the diurnal motion perpetually keepeth time;) no individual would laſt one moment. Certain it is, that the matter is in a perpetual flux, and never at a ſtay. The great winding-ſheets that bury all things in oblivion, are two; deluges, and earthquakes. As for conflagrations, and great droughts, they do not merely diſpeople but deſtroy. *Phaeton*'s car went but a day. And the three years drought, in the time of *Elias*, was but particular, and left people alive. As for the great burnings by lightnings, which are often in the *Weſt-Indies*, they are but narrow. But in the other two deſtructions, by deluge and earthquake, it is farther to be noted, that the remnant of people which hap to be reſerved, are commonly ignorant and mountainous people, that can give no account of the time paſt: So that the oblivion is all one, as if none had been left. If you conſider well of the people of the *Weſt-Indies*, it is very probable that they are a newer, or younger people, than the people of the old world: and it is much more likely, that the deſtruction that hath heretofore been there, was not by earthquakes, (as the *AEgyptian* prieſt told *Solon*, concerning the iſland of *Atlantis*, that it was ſwallow'd by an earthquake;) but rather, that it was deſolated by a particular deluge; for earthquakes are ſeldom in thoſe parts: but on the other ſide, they have ſuch pouring rivers, as the rivers of *Aſia*, and *Africa*, and *Europe*, are but brooks to them. Their *Andes* likewiſe, or mountains, are far higher than thoſe with us; whereby it ſeems, that the remnants of generation of men, were, in ſuch a particular deluge, ſaved. As for the obſervation that *Machiavel* hath, that the jealouſy of ſects doth much extinguiſh the memory of things; traducing *Gregory* the Great, that he did what in him lay, to extinguiſh all heathen antiquities; I do not find that thoſe zeals do any great effects, nor laſt long: as it appeared in the ſucceſſion of *Sabinian*, who did revive the former antiquities.

The viciſſitude or mutations, in the ſuperior globe, are no fit matter for this preſent argument. It may be *Plato*'s great year, if the world ſhould laſt ſo long, would have ſome effect, not in renewing the ſtate of like individuals, (for that is the fume of thoſe, that conceive the celeſtial bodies have more accurate influences upon theſe things below, than indeed they have,) but in groſs. Comets, out of queſtion, have likewiſe power and effect, over the groſs and maſs of things: but they are rather gazed upon, and waited upon in their journey, than wiſely obſerved in their effects; eſpecially in their reſpective effects; that is, what kind of comet, for magnitude,

nitude, colour, verſion of the beams, placing in the region of heaven, or laſting, produceth what kind of effects.

THERE is a toy, which I have heard, and I would not have it given over, but waited upon a little. They ſay it is obſerved in the *Low Countries*, (I know not in what part) that every five and thirty years, the ſame kind and ſute of years and weathers, comes about again: as great froſt, great wet, great droughts, warm winters, ſummers with little heat, and the like; and they call it the prime. It is a thing I do the rather mention, becauſe, computing backwards, I have found ſome concurrence.

BUT to leave theſe points of nature, and to come to men. The greateſt viciſſitude of things amongſt men, is the viciſſitude of ſects and religions: for thoſe orbs rule in mens minds moſt. The true religion is built upon the rock; the reſt are toſs'd upon the waves of time. To ſpeak therefore of the cauſes of new ſects, and to give ſome counſel concerning them, as far as the weakneſs of human judgment can give ſtay to ſo great revolutions:

WHEN the religion formerly received is rent by diſcords; and when the holineſs of the profeſſors of religion is decayed and full of ſcandal; and withal the times be ſtupid, ignorant, and barbarous, you may doubt the ſpringing up of a new ſect; if then alſo there ſhould ariſe any extravagant and ſtrange ſpirit to make himſelf author thereof: all which points held when *Mahomet* publiſhed his Law. If a new ſect have not two properties, fear it not; for it will not ſpread. The one is the ſupplanting, or the oppoſing of authority eſtabliſhed: for nothing is more popular than that. The other is the giving licence to pleaſures and a voluptuous life. For as for ſpeculative hereſies (ſuch as were in ancient times the *Arians*, and now the *Arminians*) though they work mightily upon mens wits, yet they do not produce any great alterations in ſtates; except it be by the help of civil occaſions. There be three manner of plantations of new ſects: by the power of ſigns and miracles; by the eloquence and wiſdom of ſpeech and perſuaſion; and by the ſword. For martyrdoms, I reckon them amongſt miracles; becauſe they ſeem to exceed the ſtrength of human nature: and I may do the like of ſuperlative and admirable holineſs of life. Surely there is no better way to ſtop the riſing of new ſects and ſchiſms; than to reform abuſes; to compound the ſmaller differences; to proceed mildly, and not with ſanguinary perſecutions; and rather to take off the principal authors, by winning and advancing them, than to enrage them by violence and bitterneſs.

THE changes and viciſſitude in wars are many: but chiefly in three things; in the ſeats or ſtages of the war; in the weapons; and in the manner of the conduct. Wars, in ancient time, ſeemed more to move from eaſt to weſt: for the *Perſians*, *Aſſyrians*, *Arabians*, *Tartars*, (which were the invaders) were all eaſtern people. It is true, the *Gauls* were weſtern; but we read but of two incurſions of theirs; the one to *Gallo-Graecia*, the other to *Rome*. But eaſt and weſt have no certain points of heaven, and no more have the wars, either from the eaſt or weſt, any certainty of obſervation; but north and ſouth are fixed: and it hath ſeldom or never been ſeen, that the far ſouthern people have invaded the northern, but contrariwiſe; whereby it is manifeſt, that the northern tract of the world, is in nature the more martial region: be it in reſpect of the ſtars of that hemiſphere, or of the great continents that are upon the north; whereas the ſouth part, for aught that is known, is almoſt all ſea; or (which is moſt apparent)

of

of the cold of the northern parts, which is that, which without aid of diſcipline, doth make the bodies hardeſt, and the courage warmeſt.

Upon the breaking and ſhivering of a great ſtate and empire, you may be ſure to have wars. For great empires, while they ſtand, do enervate and deſtroy the forces of the natives, which they have ſubdued, reſting upon their own protecting forces: and then when they fail alſo, all goes to ruin, and they become a prey. So was it in the decay of the *Roman* empire, and likewiſe in the empire of *Almaigne*, after *Charles* the Great, every bird taking a feather; and were not unlike to befal to *Spain*, if it ſhould break. The great acceſſions and unions of kingdoms, do likewiſe ſtir up wars. For when a ſtate grows to an over-power, it is like a great flood, that will be ſure to overflow. As it hath been ſeen in the ſtates of *Rome*, *Turkey*, *Spain*, and others. Look when the world hath feweſt barbarous people, but ſuch as commonly will not marry or generate, except they know means to live; (as it is almoſt every where at this day, except *Tartary*,) there is no danger of inundations of people: but when there be great ſhoals of people, which go on to populate, without foreſeeing means of life and ſuſtentation, it is of neceſſity, that once in an age or two, they diſcharge a portion of their people upon other nations; which the ancient northern people were wont to do by lot; caſting lots, what part ſhould ſtay at home, and what ſhould ſeek their fortunes. When a warlike ſtate grows ſoft and effeminate, they may be ſure of a war. For commonly ſuch ſtates are grown rich in the time of their degenerating; and ſo the prey inviteth, and their decay in valour encourageth a war.

As for the weapons, it hardly falleth under rule and obſervation: yet we ſee, even they have returns and viciſſitudes. For certain it is, that ordnance was known in the city of the *Oxidraces* in *India*; and was that which the *Macedonians* called thunder and lightening, and magick. And it is well known, that the uſe of ordnance hath been in *China* above two thouſand years. The conditions of weapons, and their improvement are, firſt, the fetching afar off; for that outruns the danger; as it is ſeen in ordnance and muskets. Secondly, the ſtrength of the percuſſion; wherein likewiſe ordnance do exceed all arietations, and ancient inventions. The third is, the commodious uſe of them; as that they may ſerve in all weathers; that the carriage may be light and manageable; and the like.

For the conduct of the war: at the firſt, men reſted extremely upon number: they did put the wars likewiſe upon main force and valour, pointing days for pitched fields, and ſo trying it out, upon an even match: and they were more ignorant in ranging and arraying their battles. After they grew to reſt upon number, rather competent than vaſt; they grew to advantages of place, cunning diverſions, and the like: and they grew more skilful in the ordering of their battles.

In the youth of a ſtate, arms do flouriſh; in the middle age of a ſtate, learning; and then both of them together for a time: in the declining age of a ſtate, mechanical arts and merchandize. Learning hath its infancy, when it is but beginning, and almoſt childiſh: then its youth, when it is luxuriant and juvenile: then its ſtrength of years, when it is ſolid and reduced: and laſtly, its old age, when it waxeth dry and exhauſt. But it is not good to look too long upon theſe turning wheels of viciſſitude, leſt we become giddy. As for the philology of them, that is but a circle of tales, and therefore not fit for this writing.

## LX. *A fragment of an eſſay on fame.*

THE poets make fame a monſter. They deſcribe her in part finely and elegantly; and in part gravely and ſententiouſly. They ſay, look how many feathers ſhe hath, ſo many eyes ſhe hath underneath; ſo many tongues; ſo many voices; ſhe pricks up ſo many ears.

THIS is a flouriſh: there follow excellent parables; as that ſhe gathereth ſtrength in going; that ſhe goeth upon the ground, and yet hideth her head in the clouds. That in the day-time ſhe ſitteth in a watch-tower, and flieth moſt by night: that ſhe mingleth things done, with things not done: and that ſhe is a terror to great cities. But that which paſſeth all the reſt is, they do recount that the earth, mother of the giants, that made war againſt *Jupiter*, and were by him deſtroyed, thereupon in anger brought forth fame; for certain it is, that rebels figured by the giants and ſeditious fames and libels, are but brothers and ſiſters; maſculine and feminine. But now if a man can tame this monſter, and bring her to feed at the hand, and govern her, and with her fly other ravening fowl, and kill them, it is ſomewhat worth. But we are infected with the ſtyle of the poets. To ſpeak now in a ſad and ſerious manner; there is not in all the politicks a place leſs handled, and more worthy to be handled, than this of fame. We will therefore ſpeak of theſe points: What are falſe fames; and what are true fames; and how they may be beſt diſcerned; how fames may be ſown and raiſed; how they may be ſpread and multiplied; and how they may be checked and laid dead. And other things concerning the nature of fame. Fame is of that force, as there is ſcarcely any great action wherein it hath not a great part, eſpecially in the war. *Mucianus* undid *Vitellius* by a fame that he ſcattered; that *Vitellius* had in purpoſe to remove the legions of *Syria* into *Germany*, and the legions of *Germany* into *Syria*; whereupon the legions of *Syria* were infinitely inflamed. *Julius Caeſar* took *Pompey* unprovided, and laid aſleep his induſtry and preparations, by a fame that he cunningly gave out; how *Caeſar*'s own ſoldiers loved him not; and being wearied with the wars, and laden with the ſpoils of *Gaul*, would forſake him as ſoon as he came into *Italy*. *Livia* ſettled all things for the ſucceſſion of her ſon *Tiberius*, by continual giving out, that her huſband *Auguſtus* was upon recovery and amendment. And it is an uſual thing with the baſhaws, to conceal the death of the Great *Turk* from the janizaries and men of war, to ſave the ſacking of *Conſtantinople*, and other towns, as their manner is. *Themiſtocles* made *Xerxes*, king of *Perſia*, poſt apace out of *Graecia*, by giving out that the *Graecians* had a purpoſe to break his bridge of ſhips which he had made athwart the *Helleſpont*. There be a thouſand ſuch like examples, and the more they are, the leſs they need to be repeated, becauſe a man meeteth with them every where: therefore let all wiſe governours have as great a watch and care over fames, as they have of the actions and deſigns themſelves.

*The reſt was not finiſhed.*

A

# FRAGMENT.

OF THE

# COLOURS

OF

# GOOD and EVIL.

IN deliberatives, the point is, what is good, and what is evil; and of good, what is greater, and of evil, what is leſs.

So that the perſuader's labour is, to make things appear good or evil, and that in higher or lower degree, which as it may be performed by true and ſolid reaſons, ſo it may be repreſented alſo by colours, popularities and circumſtances, which are of ſuch force, as they ſway the ordinary judgment either of a weak man, or of a wiſe man, not fully and conſiderately attending and pondering the matter. Beſides their power to alter the nature of the ſubject in appearance, and ſo to lead to error, they are of no leſs uſe to quicken and ſtrengthen the opinions and perſuaſions which are true; for reaſons plainly delivered, and always after one manner, eſpecially with fine and faſtidious minds, enter but heavily and dully: whereas if they be varied, and have more life and vigour put into them by theſe forms and inſinuations, they cauſe a ſtronger apprehenſion, and many times ſuddenly win the mind to a reſolution. Laſtly, to make a true and ſafe judgment, nothing can be of greater uſe and defence to the mind, than the diſcovering and reprehenſion of theſe colours, ſhewing in what caſes they hold, and in what they deceive: which as it cannot be done but out of a very univerſal knowledge of the nature of things, ſo being performed, it ſo cleareth man's judgment and election, as it is the leſs apt to ſlide into any error.

## A table of the colours, or appearances of good and evil, and their degrees, as places of perſuaſion and diſſuaſion, and their ſeveral fallacies, and the elenches of them.

1. *Cui caeterae partes vel ſectae ſecundas unanimiter deferunt, cum ſingulae principatum ſibi vindicent, melior reliquis videtur. Nam primas quaeque ex zelo videtur ſumere, ſecundas autem ex vero & merito tribuere.*

SO *Cicero* went about to prove the ſect of Academicks, which ſuſpended all aſſeveration, for to be the beſt; for, ſaith he, aſk a Stoick which philoſophy is true, he will prefer his own. Then aſk him, which approacheth next the truth, he will confeſs the Academicks. So deal with the Epicure, that will ſcarce endure the Stoick to be in ſight of him, ſo ſoon as he hath placed himſelf, he will place the Academicks next him.

So if a prince took divers competitors to a place, and examined them ſeverally, whom next themſelves they would rareſt commend, it were like the ableſt man ſhould have the moſt ſecond voices.

THE fallax of this colour happeneth oft in reſpect of envy, for men are accuſtomed after themſelves and their own faſhion, to incline unto them which are ſofteſt, and are leaſt in their way, in deſpight and derogation of them that hold them hardeſt to it. So that this colour of meliority and preheminence is a ſign of enervation and weakneſs.

2. *Cujus excellentia vel exuperantia melior, id toto genere melius.*

APPERTAINING to this, are the forms: let us not wander in generalities: let us compare particular with particular, *&c.* This appearance, though it ſeem of ſtrength, and rather logical than rhetorical, yet is very oft a fallax.

SOMETIME becauſe ſome things are in kind very caſual, which if they eſcape prove excellent; ſo that the kind is inferior, becauſe it is ſo ſubject to peril, but that which is excellent being proved is ſuperior, as the bloſſom of *March*, and the bloſſom of *May*, whereof the *French* verſe goeth:

*Burgeon de Mars enfans de Paris,*
*Si un eſchape, il en vaut dix.*

So that the bloſſom of *May* is generally better than the bloſſom of *March*; and yet the beſt bloſſom of *March* is better than the beſt bloſſom of *May*. Sometimes becauſe the nature of ſome kinds is to be more equal, and more indifferent, and not to have very diſtant degrees, as hath been noted in the warmer climates, the people are generally more wiſe, but in the northern climate, the wits of chief are greater. So in many armies, if the matter ſhould be tried by duel between two champions, the victory ſhould go on the one ſide, and yet if it be tried by the groſs, it would go on the other ſide: for excellencies go as it were by chance, but kinds go by a more certain nature; as by diſcipline in war.

LASTLY; Many kinds have much refuſe, which countervail that which they have excellent, and therefore generally metal is more precious than ſtone; and yet a diamond is more precious than gold.

3. *Quod ad veritatem refertur majus eſt quam quod ad opinionem. Modus autem & probatio ejus quod ad opinionem pertinet haec eſt: quod quis ſi clam putaret fore facturus non eſſet.*

So the Epicures ſay of the Stoicks felicity placed in virtue: That it is like the felicity of a player, who if he were left of his auditory and their applauſe, he would ſtraight be out of heart and countenance; and therefore they call virtue *bonum theatrale:* but of riches the poet ſaith;

*Populus me ſibilat,*
*At mihi plaudo.*

And of pleaſure,

*Grata ſub imo*
*Gaudia corde premens, vultu ſimulante pudorem.*

The fallax of this colour is ſomewhat ſubtile, though the anſwer to the example be ready, for virtue is not choſen *propter auram popularem.* But contrariwiſe, *maxime omnium teipſum reverere*; ſo as a virtuous man will be virtuous *in ſolitudine*, and not only *in theatro*, though percaſe it will be more ſtrong by glory and fame, as an heat which is doubled by reflexion: but that denieth the ſuppoſition, it doth not reprehend the fallax, whereof the reprehenſion is a law, that virtue (ſuch as is joined with labour and conflict) would not be choſen but for fame and opinion, yet it followeth not that the chief motive of the election ſhould not be real and for itſelf, for fame may be only *cauſa impulſiva*, and not *cauſa conſtituens*, or *efficiens.* As if there were two horſes, and the one would do better without the ſpur than the other: but again, the other with the ſpur would far exceed the doing of the former, giving him the ſpur alſo; yet the latter will be judged to be the better horſe, and the former as to ſay, tuſh, the life of this horſe is but in the ſpur, will not ſerve as to a wiſe judgment: for ſince the ordinary inſtrument of horſemanſhip is the ſpur, and that it is no matter of impediment or burden, the horſe is not to be recounted the leſs of, which will not do well without the ſpur, but rather the other is to be reckoned a delicacy than a virtue; ſo glory and honour are the ſpurs to virtue: and although virtue would languiſh without them, yet ſince they be always at hand to attend virtue, virtue is not to be ſaid the leſs choſen for itſelf, becauſe it needeth the ſpur of fame and reputation: and therefore that poſition, *nota ejus rei quod propter opinionem & non propter veritatem eligitur, haec eſt; quod quis ſi clam putaret fore facturus non eſſet*, is reprehended.

4. *Quod rem integram ſervat bonum, quod ſine receptu eſt malum: Nam ſe recipere non poſſe impotentiae genus eſt, potentia autem bonum.*

Hereof *AEſop* framed the fable of the two frogs, that conſulted together in the time of drought, (when many plaſhes that they had repaired to were dry) what was to be done; and the one propounded to go down into a deep well, becauſe it was like the water would not fail there; but the other anſwered, yea, but if it do fail, how ſhall we get up again? And the reaſon is, that human actions are ſo uncertain and ſubject to perils, as that ſeemeth the beſt courſe which hath moſt paſſages out of it. Appertaining to this perſuaſion, the forms are: you ſhall engage yourſelf on the other ſide, *non tantum, quantum voles ſumes ex fortuna, &c.* you ſhall keep the matter in your own hand. The reprehenſion of it is, that proceeding and reſolving in all actions

actions is neceſſary. For as he ſaith well, not to reſolve, is to reſolve; and many times it breeds as many neceſſities, and engageth as far in ſome other ſort, as to reſolve. So it is but the covetous man's diſeaſe, tranſlated in power, for the covetous man will enjoy nothing, becauſe he will have his full ſtore and poſſibility to enjoy the more; ſo by this reaſon a man ſhould execute nothing, becauſe he ſhould be ſtill indifferent, and at liberty to execute any thing. Beſides, neceſſity and this ſame *jacta eſt alea*, hath many times an advantage, becauſe it awaketh the powers of the mind, and ſtrengtheneth endeavour; *caeteris pares neceſſitate certe ſuperiores eſtis.*

5. *Quod ex pluribus conſtat & diviſibilibus eſt majus quam quod ex paucioribus, & magis unum: nam omnia per partes conſiderata majora videntur: quare & pluralitas partium magnitudinem prae ſe fert: fortius autem operatur pluralitas partium ſi ordo abſit; nam inducit ſimilitudinem infiniti, & impedit comprehenſionem.*

This colour ſeemeth palpable, for it is not plurality of parts without majority of parts, that maketh the total greater; yet nevertheleſs it often carries the mind away, yea, it deceiveth the ſenſe; as it ſeemeth to the eye a ſhorter diſtance of way, if it be all dead and continued, than if it have trees or buildings, or any other marks whereby the eye may divide it. So when a great moneyed man hath divided his cheſts, and coins, and bags, he ſeemeth to himſelf richer than he was; and therefore a way to amplify any thing is, to break it, and to make anatomy of it in ſeveral parts, and to examine it according to ſeveral circumſtances. And this maketh the greater ſhew if it be done without order, for confuſion maketh things muſter more; and beſides, what is ſet down by order and diviſion, doth demonſtrate that nothing is left out or omitted, but all is there; whereas if it be without order, both the mind comprehendeth leſs that which is ſet down; and beſides, it leaveth a ſuſpicion, as if more might be ſaid than is expreſſed. This colour deceiveth, if the mind of him that is to be perſuaded, do of itſelf over-conceive, or prejudge of the greatneſs of any thing; for then the breaking of it will make it ſeem leſs, becauſe it maketh it to appear more according to the truth: and therefore if a man be in ſickneſs or pain, the time will ſeem longer without a clock or hour-glaſs, than with it; for the mind doth value every moment, and then the hour doth rather ſum up the moments, than divide the day. So in a dead plain the way ſeemeth the longer, becauſe the eye hath preconceived it ſhorter than the truth; and the fruſtrating of that maketh it ſeem longer than the truth. Therefore if any man have an over-great opinion of any thing, then if another think by breaking it into ſeveral conſiderations, he ſhall make it ſeem greater to him, he will be deceived; and therefore in ſuch caſes it is not ſafe to divide, but to extol the entire ſtill in general. Another caſe wherein this colour deceiveth, is, when the matter broken or divided is not comprehended by the ſenſe, or made at once in reſpect of the diſtracting or ſcattering of it; and being entire, and not divided, is comprehended: as an hundred pounds in heaps of five pounds, will ſhew more than in one groſs heap, ſo as the heaps be all upon one table to be ſeen at once, otherwiſe not: as flowers growing ſcattered in divers beds, will ſhew more than if they did grow in one bed, ſo as all thoſe beds be within a plot, that they be object to view at once, otherwiſe not: And therefore men, whoſe living lieth together in one ſhire, are commonly counted greater landed than thoſe whoſe livings are diſperſed, though it be more, becauſe of the notice and comprehenſion. A third caſe

wherein this colour deceiveth, and it is not ſo properly a caſe or reprehenſion, as it is a counter colour; being in effect as large as the colour itſelf; and that is, *omnis compoſitio indigentiae cujuſdam in ſingulis videtur eſſe particeps*, becauſe if one thing would ſerve the turn, it were ever beſt, but the defect and imperfections of things hath brought in that help to piece them up; as it is ſaid, *Martha, Martha, attendis ad plurima, unum ſufficit.* So likewiſe hereupon *AEſop* framed the fable of the fox and the cat; whereas the fox bragged what a number of ſhifts and devices he had to get from the hounds, and the cat ſaid he had but one, which was to climb a tree, which in proof was better worth than all the reſt; whereof the proverb grew, *multa novit vulpes, ſed felis unum magnum.* And in the moral of this fable it comes likewiſe to paſs, that a good ſure friend is a better help at a pinch, than all the ſtratagems and policies of a man's own wit. So it falleth out to be a common error in negotiating, whereas men have many reaſons to induce or perſuade, they ſtrive commonly to utter and uſe them all at once, which weakneth them. For it argueth, as was ſaid, a needineſs in every of the reaſons by itſelf, as if one did not truſt to any of them, but fled from one to another, helping himſelf only with that: *Et quae non proſunt ſingula, multa juvant.* Indeed in a ſet ſpeech in an aſſembly, it is expected a man ſhould uſe all his reaſons in the caſe he handleth, but in private perſuaſions it is always a great error. A fourth caſe wherein this colour may be reprehended, is in reſpect of that ſame *vis unita fortior*, according to the tale of the *French* king, that when the emperor's embaſſador had recited his maſter's ſtyle at large, which conſiſteth of many countries and dominions; the *French* king willed his chancellor, or other miniſter, to repeat over *France* as many times as the other had recited the ſeveral dominions; intending it was equivalent with them all, and more compacted and united. There is alſo appertaining to this colour another point, why breaking of a thing doth help it, not by way of adding a ſhew of magnitude unto it, but a note of excellency and rarity; whereof the forms are, where ſhall you find ſuch a concurrence? Great, but not compleat; for it ſeems a leſs work of nature or fortune, to make any thing in his kind greater than ordinary, than to make a ſtrange compoſition. Yet if it be narrowly conſidered, this colour will be reprehended or encountred, by imputing to all excellencies in compoſitions a kind of poverty, or at leaſt a caſualty or jeopardy; for from that which is excellent in greatneſs, ſomewhat may be taken, or there may be a decay, and yet ſufficiently left; but from that which hath his price in compoſition if you take away any thing, or any part do fail, all is diſgrace.

6. *Cujus privatio bona, malum; cujus privatio mala, bonum.*

The forms to make it conceived, that that was evil which is changed for the better, are, he that is in hell thinks there is no other heaven. *Satis quercus*, Acorns were good till bread was found, *&c.* And of the other ſide, the forms to make it conceived, that that was good which was changed for the worſe are, *bona magis carendo quam fruendo ſentimus: bona a tergo formoſiſſima:* good things never appear in their full beauty, till they turn their back, and be going away, *&c.* The reprehenſion of this colour is, that the good or evil which is removed, may be eſteemed good or evil comparatively, and not poſitively or ſimply. So that if the privation be good, it follows not the former condition was evil, but leſs good; for the flower or bloſſom is a poſitive good, although the remove of it to give place to the fruit, be a comparative good. So in the tale of *AEſop*, when the old fainting

fainting man in the heat of the day caſt down his burden, and called for death; and when death came to know his will with him, ſaid, it was for nothing but to help him up with his burden again. It doth not follow, that becauſe death, which was the privation of the burden, was ill, therefore the burden was good. And in this part, the ordinary form of *malum neceſſarium* aptly reprehendeth this colour; for *privatio mali neceſſarii eſt mala*, and yet that doth not convert the nature of the neceſſary evil, but it is evil.

AGAIN, it cometh ſometimes to paſs, that there is an equality in the change of privation, and as it were a *dilemma boni*, or a *dilemma mali*: ſo that the corruption of the one good, is a generation of the other. *Sorti pater aequus utrique eſt*: and contrary, the remedy of the one evil, is the occaſion and commencement of another, as in *Scylla* and *Charybdis*.

7. *Quod bono vicinum bonum, quod à bono remotum, malum.*

SUCH is the nature of things, that things contrary, and diſtant in nature and quality, are alſo ſever'd and disjoined in place; and things like and conſenting in quality, are placed, and as it were quartered together: for partly in regard of the nature, to ſpread, multiply, and infect in ſimilitude; and partly in regard of nature to break, expel, and alter that which is diſagreeable and contrary, moſt things do either aſſociate, and draw near to themſelves the like, or at leaſt aſſimilate to themſelves that which approacheth near them, and do alſo drive away; chaſe and exterminate their contraries. And that is the reaſon commonly yielded, why the middle region of the air ſhould be coldeſt, becauſe the ſun and ſtars are either hot by direct beams, or by reflection. The direct beams heat the upper region, the reflected beams from the earth and ſeas, heat the lower region. That which is in the midſt, being fartheſt diſtant in place from theſe two regions of heat, are moſt diſtant in nature; that is coldeſt, which is that they term cold or hot *per antiperiſtaſin*; that is, environing by contraries: which was pleaſantly taken hold of by him that ſaid, that an honeſt man in theſe days, muſt needs be more honeſt than in ages heretofore, *propter antiperiſtaſin*, becauſe the ſhutting of him in the midſt of contraries, muſt needs make the honeſty ſtronger and more compact in itſelf. The reprehenſion of this colour is: firſt many things of amplitude in their kind, do as it were engroſs to themſelves all, and leave that which is next them moſt deſtitute, as the ſhoots or underwood, that grow near a great and ſpread tree, is the moſt pined and ſhrubby wood of the field, becauſe the great tree doth deprive and deceive them of ſap and nouriſhment; ſo he ſaith well, *divitis ſervi maxime ſervi*: and the compariſon was pleaſant of him, that compared courtiers attendant in the courts of princes without great place or office, to faſting-days, which were next the holy-days, but otherwiſe were the leaneſt days in all the week.

ANOTHER reprehenſion is, that things of greatneſs and predominancy, though they do not extenuate the things adjoining in ſubſtance, yet they drown them and obſcure them in ſhew and appearance; and therefore the aſtronomers ſay, that whereas in all other planets conjunction is the perfecteſt amity; the ſun contrariwiſe is good by aſpect, but evil by conjunction.

A third reprehenſion is, becauſe evil approacheth to good ſometimes for concealment, ſometimes for protection; and good to evil for converſion and reformation. So hypocriſy draweth near to religion for covert, and hiding

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it ſelf; *ſaepe latet vitium proximitate boni*; and ſanctuary men, which were commonly inordinate men and malefactors, were wont to be neareſt to prieſts and prelates, and holy men; for the majeſty of good things is ſuch, as the confines of them are reverend. On the other ſide, our Saviour charged with nearneſs of publicans and rioters, ſaid, *the phyſician approacheth the ſick, rather than the whole.*

8. *Quod quis culpa ſua contraxit, majus malum: quod ab externis imponitur, minus malum.*

The reaſon is, becauſe the ſting and remorſe of the mind accuſing it ſelf, doubleth all adverſity: contrariwiſe, the conſidering and recording inwardly, that a man is clear and free from fault, and juſt imputation, doth attemper outward calamities. For if the will be in the ſenſe, and in the conſcience both, there is a gemination of it; but if evil be in the one, and comfort in the other, it is a kind of compenſation: ſo the poets in tragedies do make the moſt paſſionate lamentation, and thoſe that forerun final deſpair, to be accuſing, queſtioning, and torturing of a man's life.

*Seque unum clamat cauſamque caputque malorum.*

And contrariwiſe, the extremities of worthy perſons have been annihilated in the conſideration of their own good deſerving. Beſides, when the evil cometh from without, there is left a kind of evaporation of grief, if it come by human injury, either by indignation, and meditating of revenge from our ſelves, or by expecting of fore-conceiving, that *Nemeſis* and retribution will take hold of the authors of our hurt; or if it be by fortune or accident, yet there is left a kind of expoſtulation againſt the divine powers.

*Atque deos atque aſtra vocat crudelia mater.*

But where the evil is derived from a man's own fault, there all ſtrikes deadly inwards, and ſuffocateth. The reprehenſion of this colour is, firſt in reſpect of hope, for reformation of our faults is *in noſtra poteſtate*; but amendment of our fortune ſimply, is not. Therefore *Demoſthenes*, in many of his orations, ſaith thus to the people of *Athens*: That which having regard to the time paſt, is the worſe point and circumſtance of all the reſt; that as to the time to come is the beſt: what is that? Even this, that by your ſloth, irreſolution and miſgovernment, your affairs are grown to this declination and decay. For had you uſed and ordered your means and forces to the beſt, and done your parts every way to the full, and notwithſtanding your matters ſhould have gone backward in this manner as they do, there had been no hope left of recovery or reparation; but ſince it hath been only by our own errors, *&c.* So *Epictetus* in his degrees ſaith, the worſt ſtate of man is to accuſe external things, better than that to accuſe a man's ſelf, and beſt of all to accuſe neither.

Another reprehenſion of this colour, is in reſpect of the well bearing of evils, wherewith a man can charge no body but himſelf, which maketh them the leſs.

*Leve fit quod bene fertur onus.*

And therefore many natures that are either extremely proud, and will take no fault to themſelves, or elſe very true, and cleaving to themſelves (when they ſee the blame of any thing that falls out ill muſt light upon themſelves) have no other ſhift but to bear it out well, and to make the leaſt of it; for as we ſee when ſometimes a fault is committed, and before

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it be known who is to blame, much ado is made of it; but after, if it appear to be done by a ſon, or by a wife, or by a near friend, then it is light made of: ſo much more when a man muſt take it upon himſelf. And therefore it is commonly ſeen, that women that marry huſbands of their own chuſing againſt their friends conſents, if they be never ſo ill uſed, yet you ſhall ſeldom ſee them complain, but ſet a good face on it.

9. *Quod opera & virtute noſtra partum eſt, majus bonum; quod ab alieno beneficio vel ab indulgentia fortunae delatum eſt, minus bonum.*

THE reaſons are firſt the future hope, becauſe in the favours of others, or the good winds of fortune, we have no ſtate or certainty; in our endeavours or abilities we have. So as when they have purchaſed us one good fortune, we have them as ready and better edged, and inured to procure another.

THE forms be: you have won this by play, you have not only the water, but you have the receipt, you can make it again if it be loſt, *&c.* Next, becauſe theſe properties which we enjoy by the benefit of others, carry with them an obligation which ſeemeth a kind of burden, whereas the other which derive from ourſelves are like the freeſt patents, *abſque aliquo inde reddendo*; and if they proceed from fortune or providence, yet they ſeem to touch us ſecretly with the reverence of the divine powers, whoſe favours we taſte, and therefore work a kind of religious fear and reſtraint; whereas in the other kind, that comes to paſs which the prophet ſpeaketh, *laetantur & exultant, immolant plagis ſuis, & ſacrificant reti ſuo.*

THIRDLY, Becauſe that which cometh unto us without our own virtue, yielded not that commendation and reputation; for actions of great felicity may draw wonder, but praiſe leſs; as *Cicero* ſaid to *Caeſar*, *Quae miremur, habemus; quae laudemus, expectamus.*

FOURTHLY, Becauſe the purchaſes of our own induſtry are joined commonly with labour and ſtrife, which gives an edge and appetite, and makes the fruition of our deſires more pleaſant. *Suavis cibus a venatu.*

ON the other ſide, there be four counter colours to this colour, rather than reprehenſions, becauſe they be as large as the colour itſelf; firſt becauſe felicity ſeemeth to be a character of the favour and love of the divine powers, and accordingly worketh both confidence in ourſelves, and reſpect and authority from others. And this felicity extendeth to many caſual things, whereunto the care or virtue of man cannot extend, and therefore ſeemeth to be a larger good; as when *Caeſar* ſaid to the ſailor, *Caeſarem portas & fortunam ejus*; if he had ſaid, *& virtutem ejus*, it had been ſmall comfort againſt a tempeſt, otherwiſe than if it might ſeem upon merit to induce fortune.

NEXT, whatſoever is done by virtue and induſtry, ſeems to be done by a kind of habit and art, and therefore open to be imitated and followed; whereas felicity is imitable: ſo we generally ſee, that things of nature ſeem more excellent than things of art, becauſe they be imitable: for, *quod imitabile eſt, potentia quadam vulgatum eſt.*

THIRDLY, Felicity commendeth thoſe things which come without our own labour; for they ſeem gifts, and the other ſeems penniworths: whereupon *Plutarch* ſaith elegantly of the acts of *Timoleon*, who was ſo fortunate, compared with the acts of *Ageſilaus* and *Epaminondas*; that they were like *Homer*'s verſes, they ran ſo eaſily and ſo well. And therefore it is the word we

we give unto poesy, terming it a happy vein, because facility seemeth ever to come from happiness.

Fourthly, This same *praeter spem, vel praeter expectatum*, doth increase the price and pleasure of many things, and this cannot be incident to those things that proceed from our own care and compass.

10. *Gradus privationis major videtur quàm gradus diminutionis; & rursus gradus inceptionis major videtur, quam gradus incrementi.*

It is a position in the mathematicks, that there is no proportion between somewhat and nothing, therefore the degree of nullity and quiddity or act, seemeth larger than the degrees of increase and decrease; as to a *monoculus* it is more to lose one eye, than to a man that hath two eyes. So if one have lost divers children, it is more grief to him to lose the last, than all the rest; because he is *spes gregis*. And therefore *Sibylla* when she brought her three books, and had burned two, did double the whole price of both the other, because the burning of that had been *gradus privationis*, and not *diminutionis*. This colour is reprehended first in those things, the use and service whereof, resteth in sufficiency, competency, or determinate quantity: as if a man be to pay one hundred pounds upon a penalty, it is more to him to want twelve pence, than after that twelve pence supposed to be wanting, to want ten shillings more; so the decay of a man's estate seems to be most touched in the degree, when he first grows behind, more than afterwards, when he proves nothing worth. And hereof the common forms are, *sera in fundo parsimonia*, and as good never a whit, as never the better, *&c.* It is reprehended also in respect of that notion, *corruptio unius generatio alterius:* so that *gradus privationis* is many times less matter, because it gives the cause and motive to some new course. As when *Demosthenes* reprehended the people, for hearkening to the conditions offered by king *Philip*, being not honourable nor equal, he saith they were but elements of their sloth and weakness, which if they were taken away, necessity would teach them stronger resolutions. So doctor *Hector* was wont to say to the dames of *London*, when they complained they were they could not tell how, but yet they could not endure to take any medicine, he would tell them, their way was only to be sick, for then they would be glad to take any medicine.

Thirdly, This colour may be reprehended, in respect that the degree of decrease is more sensitive than the degree of privation, for in the mind of man *gradus diminutionis* may work a wavering between hope and fear, and so keep the mind in suspence, from settling and accommodating in patience and resolution; hereof the common forms are, better eye out, than always ake; make or mar, *&c.*

For the second branch of this colour, it depends upon the same general reason: hence grew the common place of extolling the beginning of every thing: *dimidium facti qui bene coepit habet.* This made the astrologers so idle as to judge of a man's nature and destiny, by the constellation of the moment of his nativity, or conception. This colour is reprehended, because many inceptions are but as *Epicurus* termeth them, *tentamenta*, that is, imperfect offers and essays, which vanish and come to no substance without an iteration; so as in such cases the second degree seems the worthiest, as the body-horse in the cart, that draweth more than the fore-horse: hereof the common forms are, the second blow makes the fray, the second word

makes

makes the bargain; *alter malo principium dedit, alter modum abſtulit, &c.* Another reprehenſion of this colour is in reſpect of defatigation, which makes perſeverance of greater dignity than inception, for chance or inſtinct of nature may cauſe inception; but ſettled affection, or judgment, maketh the continuance.

THIRDLY, this colour is reprehended in ſuch things, which have a natural courſe and inclination, contrary to an inception. So that the inception is continually evacuated and gets no ſtart, but there behoveth *prima inceptio*, as in the common form, *non progredi eſt regredi, qui non proficit deficit*, running againſt the hill; rowing againſt the ſtream, *&c.* For if it be with the ſtream or with the hill, then the degree of inception is more than all the reſt.

FOURTHLY, this colour is to be underſtood of *gradus inceptionis a potentia ad actum, comparatus cum gradu ab actu ad incrementum.* For otherwiſe, *major videtur gradus ab impotentia, ad potentiam; quam a potentia ad actum.*

# THE HISTORY OF THE REIGN OF KING HENRY VII.

THE

# HISTORY

OF THE

# REIGN

OF

KING *HENRY* VII.

TO THE

Moſt Illuſtrious and moſt Excellent

# PRINCE CHARLES,

## Prince of *Wales*, Duke of *Cornwall*, Earl of *Cheſter*, &c.

IT MAY PLEASE YOUR HIGHNESS,

IN part of my acknowledgment to your highneſs, I have endeavoured to do honour to the memory of the laſt king of *England*, that was anceſtor to the king your father, and your ſelf; and was that king to whom both unions may in a ſort refer: that of the roſes being in him conſummate, and that of the kingdoms by him begun: beſides, his times deſerve it. For he was a wiſe man, and an excellent king; and yet the times were rough, and full of mutations, and rare accidents. And it is with times, as it is with ways: Some are more up-hill and down-hill, and ſome are more flat and plain; and the one is better for the liver, and the other for the writer. I have not flattered him, but took him to life as well as I could, ſitting ſo far off, and having no better light. It is true, your highneſs hath a living pattern, incomparable, of the king your father: But it is not amiſs for you alſo to ſee one of theſe ancient pieces. God preſerve your highneſs.

Your highneſs moſt humble

and devoted ſervant,

FRANCIS ST. ALBAN.

THE

# THE HISTORY OF THE REIGN OF KING *HENRY* VII.

AFTER that *Richard* the third of that name, king in fact only, but tyrant both in title and regiment, and ſo commonly termed and reputed in all times ſince, was by the divine revenge, favouring the deſign of an exile-man, overthrown and ſlain at *Boſworth-field*: There ſucceeded in the kingdom the earl of *Richmond*, thence-forth ſtyled *Henry* the ſeventh. The king immediately after the victory, as one that had been bred under a devout mother, and was in his nature a great obſerver of religious forms, cauſed *Te Deum laudamus* to be ſolemnly ſung in the preſence of the whole army upon the place, and was himſelf with general applauſe, and great cries of joy, in a kind of military election, or recognition, ſaluted king. Mean while the body of *Richard*, after many indignities and reproaches, (the *diriges* and obſequies of the common people towards tyrants) was obſcurely buried. For though the king of his nobleneſs gave charge unto the friars of *Leiceſter* to ſee an honourable interment to be given to it, yet the religious people themſelves (being not free from the humours of the vulgar) neglected it; wherein nevertheleſs they did not then incur any man's blame or cenſure: No man thinking any ignominy or contumely unworthy of him, that had been the executioner of king *Henry* the ſixth (that innocent prince) with his own hands; the contriver of the death of the duke of *Clarence* his brother; the murtherer of his two nephews, (one of them his lawful king in the preſent, and the other in the future, failing of him) and vehemently ſuſpected to have been the impoiſoner of his wife, thereby to make vacant his bed, for a marriage within the degrees forbidden. And although he were a prince in military virtue approved, jealous of the honour of the *Engliſh* nation, and likewiſe a good law-maker, for the eaſe and ſolace of the common people;

people; yet his cruelties and parricides, in the opinion of all men, weighed down his virtues and merits; and in the opinion of wiſe men, even thoſe virtues themſelves were conceived to be rather feigned and affected things to ſerve his ambition, than true qualities ingenerate in his judgment or nature. And therefore it was noted by men of great underſtanding (who ſeeing his after-acts, looked back upon his former proceedings) that even in the time of king *Edward* his brother, he was not without ſecret trains and mines to turn envy and hatred upon his brother's government; as having an expectation and a kind of divination, that the king, by reaſon of his many diſorders, could not be of long life, but was like to leave his ſons of tender years; and then he knew well, how eaſy a ſtep it was, from the place of a protector, and firſt prince of the blood, to the crown. And that out of this deep root of ambition it ſprung, that as well at the treaty of peace that paſſed between *Edward* the fourth, and *Lewis* the eleventh of *France*, concluded by interview of both kings at *Piqueny*, as upon all other occaſions, *Richard* then duke of *Glouceſter* ſtood ever upon the ſide of honour, raiſing his own reputation to the diſadvantage of the king his brother, and drawing the eyes of all (eſpecially of the nobles and ſoldiers) upon himſelf; as if the king by his voluptuous life and mean marriage, were become effeminate and leſs ſenſible of honour, and reaſon of ſtate, than was fit for a king. And as for the politick and wholeſome laws which were enacted in his time, they were interpreted to be but the brocage of an uſurper, thereby to woo and win the hearts of the people, as being conſcious to himſelf, that the true obligations of ſovereignty in him failed, and were wanting. But king *Henry*, in the very entrance of his reign, and the inſtant of time when the kingdom was caſt into his arms, met with a point of great difficulty, and knotty to ſolve, able to trouble and confound the wiſeſt king in the newneſs of his eſtate; and ſo much the more, becauſe it could not endure a deliberation, but muſt be at once deliberated and determined. There were fallen to his lot, and concurrent in his perſon, three ſeveral titles to the imperial crown. The firſt, the title of the lady *Elizabeth*, with whom, by precedent pact with the party that brought him in, he was to marry. The ſecond, the ancient and long diſputed title (both by plea and arms) of the houſe of *Lancaſter*, to which he was inheritor in his own perſon. The third, the title of the ſword or conqueſt, for that he came in by victory of battel, and that the king in poſſeſſion was ſlain in the field. The firſt of theſe was faireſt, and moſt like to give contentment to the people, who by two and twenty years reign of king *Edward* the fourth, had been fully made capable of the clearneſs of the title of the white roſe or houſe of *York*; and by the mild and plauſible reign of the ſame king toward his latter time, were become affectionate to that line. But then it lay plain before his eyes, that if he relied upon that title, he could be but a king at courteſy, and have rather a matrimonial than a regal power; the right remaining in his queen, upon whoſe deceaſe, either with iſſue or without iſſue, he was to give place, and be removed. And though he ſhould obtain by parliament to be continued, yet he knew there was a very great difference between a king that holdeth his crown by a civil act of eſtates, and one that holdeth it originally by the law of nature, and deſcent of blood. Neither wanted there even at that time ſecret rumours and whiſperings (which afterwards gathered ſtrength and turned to great troubles) that the two young ſons of king *Edward* the fourth, or one of them, (which were ſaid to be deſtroyed in the *Tower,*) were not indeed murthered, but conveyed ſecretly away,

and

and were yet living: which if it had been true, had prevented the title of the lady *Elizabeth*. On the other ſide, if he ſtood upon his own title of the houſe of *Lancaſter*, inherent in his perſon, he knew it was a title condemned by parliament, and generally prejudged in the common opinion of the realm, and that it tended directly to the diſinheriſon of the line of *York*, held then the indubitate heirs of the crown. So that if he ſhould have no iſſue by the lady *Elizabeth*, which ſhould be deſcendents of the double line, then the ancient flames of diſcord and inteſtine wars upon the competition of both houſes, would again return and revive.

As for conqueſt, notwithſtanding ſir *William Stanley*, after ſome acclamations of the ſoldiers in the field, had put a crown of ornament (which *Richard* wore in the battel, and was found amongſt the ſpoils) upon king *Henry*'s head, as if there were his chief title; yet he remembred well upon what conditions and agreements he was brought in; and that to claim as conqueror, was to put as well his own party as the reſt, into terror and fear; as that which gave him power of diſannulling of laws, and diſpoſing of mens fortunes and eſtates, and the like points of abſolute power, being in themſelves ſo harſh and odious, as that *William* himſelf, commonly called the conqueror, howſoever he uſed and exerciſed the power of a conqueror to reward his *Normans*, yet he forbore to uſe that claim in the beginning, but mixed it with a titulary pretence, grounded upon the will and deſignation of *Edward* the Confeſſor. But the king, out of the greatneſs of his own mind, preſently caſt the die; and the inconveniences appearing unto him on all parts, and knowing there could not be any interreign, or ſuſpenſion of title, and preferring his affection to his own line and blood, and liking that title beſt which made him independent; and being in his nature and conſtitution of mind not very apprehenſive or forecaſting of future events afar off, but an entertainer of fortune by the day; reſolved to reſt upon the title of *Lancaſter* as the main, and to uſe the other two, that of marriage, and that of battel, but as ſupporters the one to appeaſe ſecret diſcontents, and the other to beat down open murmur and diſpute; not forgetting that the ſame title of *Lancaſter* had formerly maintained a poſſeſſion of three deſcents in the crown; and might have proved a perpetuity, had it not ended in the weakneſs and inability of the laſt prince. Whereupon the king preſently that very day, being the two and twentieth of *Auguſt*, aſſumed the ſtile of king in his own name, without mention of the lady *Elizabeth* at all, or any relation thereunto. In which courſe he ever after perſiſted; which did ſpin him a thread of many ſeditions and troubles. The king full of theſe thoughts, before his departure from *Leiceſter*, diſpatch'd ſir *Robert Willoughby* to the caſtle of *Sheriff-Hutton* in *Yorkſhire*, where were kept in ſafe cuſtody, by king *Richard*'s commandment, both the lady *Elizabeth*, daughter of king *Edward*, and *Edward Plantagenet*, ſon and heir to *George* duke of *Clarence*. This *Edward* was by the king's warrant delivered from the conſtable of the caſtle, to the hand of ſir *Robert Willoughby*; and by him with all ſafety and diligence conveyed to the tower of *London*, where he was ſhut up cloſe priſoner. Which act of the king's (being an act merely of policy and power) proceeded not ſo much from any apprehenſion he had of doctor *Shaw*'s tale at *Paul*'s croſs, for the baſtarding of *Edward* the fourth's iſſue; in which caſe this young gentleman was to ſucceed, (for that fable was ever exploded) but upon a ſettled diſpoſition to depreſs all eminent perſons of the line of *York*. Wherein ſtill the

the king, out of ſtrength of will, or weakneſs of judgment, did uſe to ſhew a little more of the party, than of the king.

For the lady *Elizabeth*, ſhe received alſo a direction to repair with all convenient ſpeed to *London*, and there to remain with the queen dowager her mother; which accordingly ſhe ſoon after did, accompanied with many noblemen and ladies of honour. In the mean ſeaſon the king ſet forwards by eaſy journeys to the city of *London*, receiving the acclamations and applauſes of the people as he went, which indeed were true and unfeigned, as might well appear in the very demonſtrations and fulneſs of the cry. For they thought generally, that he was a prince as ordained and ſent down from heaven, to unite and put to an end the long diſſenſions of the two houſes; which although they had had in the times of *Henry* the fourth, *Henry* the fifth, and a part of *Henry* the ſixth, on the one ſide, and the times of *Edward* the fourth on the other, lucid intervals and happy pauſes; yet they did ever hang over the kingdom, ready to break forth into new perturbations and calamities: And as his victory gave him the knee, ſo his purpoſe of marriage with the lady *Elizabeth*, gave him the heart; ſo that both knee and heart did truly bow before him.

He on the other ſide with great wiſdom, (not ignorant of the affections and fears of the people) to diſperſe the conceit and terror of a conqueſt, had given order, that there ſhould be nothing in his journey like unto a warlike march or manner; but rather like unto the progreſs of a king in full peace and aſſurance.

He entered the city upon a ſaturday, as he had alſo obtained the victory upon a ſaturday; which day of the week, firſt upon an obſervation, and after upon memory and fancy, he accounted and choſe as a day proſperous unto him.

The mayor and companies of the city received him at *Shoreditch*; whence with great and honourable attendance, and troops of noblemen, and perſons of quality, he entered the city; himſelf not being on horſeback, or in any open chair, or throne, but in a cloſe chariot, as one that having been ſometime an enemy to the whole ſtate, and a proſcribed perſon, choſe rather to keep ſtate, and ſtrike a reverence into the people, than to fawn upon them.

He went firſt into ſaint *Paul*'s church, where not meaning that the people ſhould forget too ſoon that he came in by battle, he made offertory of his ſtandards; and had orizons and *Te Deum* again ſung, and went to his lodging prepared in the biſhop of *London*'s palace, where he ſtayed for a time.

During his abode there, he aſſembled his council, and other principal perſons, in preſence of whom he did renew again his promiſe, to marry with the lady *Elizabeth*. This he did the rather, becauſe having at his coming out of *Britain* given artificially, for ſerving of his own turn, ſome hopes, in caſe he obtained the kingdom, to marry *Anne*, inheritreſs to the duchy of *Britain*, whom *Charles* the eighth of *France* ſoon after married; it bred ſome doubt and ſuſpicion amongſt divers that he was not ſincere, or at leaſt not fixed in going on with the match of *England* ſo much deſired: which conceit alſo, though it were but talk and diſcourſe, did much afflict the poor lady *Elizabeth* herſelf. But howſoever he both truly intended it, and deſired alſo it ſhould be ſo believed, (the better to extinguiſh envy and contradiction to his other purpoſes;) yet was he reſolved in himſelf not to proceed to the conſummation thereof, till his coronation, and a

parliament were paſt. The one, leſt a joint coronation of himſelf and his queen might give any countenance of participation of title; the other, leſt in the entailing of the crown to himſelf, which he hoped to obtain by parliament, the votes of the parliament might any ways reflect upon her.

About this time in autumn, towards the end of *September*, there began and reigned in the city and other parts of the kingdom, a diſeaſe then new: which of the accidents and manner thereof, they called the ſweating ſickneſs. This diſeaſe had a ſwift courſe, both in the ſick body, and in the time and period of the laſting thereof; for they that were taken with it, upon four and twenty hours eſcaping, were thought almoſt aſſured. And as to the time of the malice and reign of the diſeaſe ere it ceaſed; it began about the one and twentieth of *September*, and cleared up before the end of *October*, inſomuch as it was no hinderance to the king's coronation, which was the laſt of *October*; nor (which was more) to the holding of the parliament, which began but ſeven days after. It was a peſtilent fever, but (as it ſeemeth) not ſeated in the veins or humours, for that there followed no carbuncle, no purple or livid ſpots, or the like, the maſs of the body being not tainted; only a malign vapour flew to the heart, and ſeized the vital ſpirits; which ſtirred nature to ſtrive to ſend it forth by an extreme ſweat. And it appeared by experience, that this diſeaſe was rather a ſurprize of nature, than obſtinate to remedies, if it were in time looked unto. For if the patient were kept in an equal temper, both for clothes, fire, and drink, moderately warm, with temperate cordials, whereby nature's work was neither irritated by heat, nor turned back by cold, he commonly recovered. But infinite perſons died ſuddenly of it, before the manner of the cure and attendance was known. It was conceived not to be an epidemick diſeaſe, but to proceed from a malignity in the conſtitution of the air, gathered by the prediſpoſitions of ſeaſons; and the ſpeedy ceſſation declared as much.

On *Simon* and *Jude*'s eve, the king dined with *Thomas Bourchier*, archbiſhop of *Canterbury* and cardinal; and from *Lambeth* went by land over the bridge to the tower, where the morrow after he made twelve knights bannerets. But for creations he diſpenſed them with a ſparing hand. For notwithſtanding a field ſo lately fought, and a coronation ſo near at hand, he only created three: *Jaſper* earl of *Pembroke*, (the king's uncle) was created duke of *Bedford*; *Thomas* the lord *Stanley*, (the king's father in law) earl of *Derby*; and *Edward Courtney* earl of *Devon*; though the king had then nevertheleſs a purpoſe in himſelf to make more in time of parliament; bearing a wiſe and decent reſpect to diſtribute his creations, ſome to honour his coronation, and ſome his parliament.

The coronation followed two days after, upon the thirtieth day of *October*, in the year of our Lord 1485; at which time *Innocent* the eighth was pope of *Rome*; *Frederick* the third emperor of *Almain*; and *Maximilian* his ſon newly choſen king of the *Romans*; *Charles* the eighth king of *France*; *Ferdinando* and *Iſabella* king and queen of *Spain*; and *James* the third king of *Scotland*: with all which kings and ſtates, the king was at that time in good peace and amity. At which day alſo (as if the crown upon his head had put perils into his thoughts) he did inſtitute, for the better ſecurity of his perſon, a band of fifty archers, under a captain, to attend him, by the name of yeomen of his guard: and yet that it might be thought to be rather a matter of dignity, after the imitation of that he had known abroad, than any matter of diffidence appropriate to his own caſe, he made it to be

be underſtood for an ordinance not temporary, but to hold in ſucceſſion for ever after.

The ſeventh of *November* the king held his parliament at *Weſtminſter*, which he had ſummoned immediately after his coming to *London*. His ends in calling a parliament, (and that ſo ſpeedily) were chiefly three; firſt, to procure the crown to be entailed upon himſelf. Next, to have the attainders of all his party (which were in no ſmall number) reverſed, and all acts of hoſtility by them done in his quarrel, remitted and diſcharged; and on the other ſide, to attaint by parliament the heads and principals of his enemies. The third, to calm and quiet the fears of the reſt of that party by a general pardon; not being ignorant in how great danger a king ſtands from his ſubjects, when moſt of his ſubjects are conſcious in themſelves, that they ſtand in his danger. Unto theſe three ſpecial motives of a parliament was added, that he as a prudent and moderate prince made this judgment, that it was fit for him to haſten to let his people ſee, that he meant to govern by law, howſoever he came in by the ſword; and fit alſo to reclaim them to know him for their king, whom they had ſo lately talked of as an enemy, or baniſhed man. For that which concerned the entailing of the crown; (more than that he was true to his own will, that he would not endure any mention of the lady *Elizabeth*, no not in the nature of ſpecial entail;) he carried it otherwiſe with great wiſdom and meaſure. For he did not preſs to have the act penned by way of declaration or recognition of right; as on the other ſide, he avoided to have it by new law or ordinance, but choſe rather a kind of middle way, by way of eſtabliſhment, and that under covert and indifferent words; that the inheritance of the crown ſhould reſt, remain, and abide in the king, *&c.* which words might equally be applied; that the crown ſhould continue to him: but whether as having former right to it, (which was doubtful) or having it then in fact and poſſeſſion (which no man denied) was left fair to interpretation either way. And again, for the limitation of the entail, he did not preſs it to go farther than to himſelf and to the heirs of his body, not ſpeaking of his right heirs; but leaving that to the law to decide: ſo as the entail might ſeem rather a perſonal favour to him and his children, than a total diſinheriſon to the houſe of *York*. And in this form was the law drawn and paſſed. Which ſtatute he procured to be confirmed by the pope's bull the year following, with mention nevertheleſs (by way of recital) of his other titles, both of deſcent and conqueſt. So as now the wreath of three, was made a wreath of five; for to the three firſt titles of the two houſes, or lines, and conqueſt, were added two more, the authorities parliamentary and papal.

The king likewiſe in the reverſal of the attainders of his partakers, and diſcharging them of all offences incident to his ſervice and ſuccour, had his will; and acts did paſs accordingly. In the paſſage whereof, exception was taken to divers perſons in the houſe of commons, for that they were attainted, and thereby not legal, nor habilitate to ſerve in parliament, being diſabled in the higheſt degree; and that it ſhould be a great incongruity to have them to make laws, who themſelves were not inlawed. The truth was, that divers of thoſe which had in the time of king *Richard* been ſtrongeſt, and moſt declared for the king's party, were returned knights and burgeſſes for the parliament; whether by care or recommendation from the ſtate, or the voluntary inclination of the people: many of which had been by *Richard* the third attainted by outlawries, or otherwiſe. The king was ſomewhat troubled with this: For though it had a grave and ſpecious

ſhew, yet it reflected upon his party. But wiſely not ſhewing himſelf at all moved therewith, he would not underſtand it but as a caſe in law, and wiſhed the judges to be adviſed thereupon; who for that purpoſe were forthwith aſſembled in the exchequer-chamber (which is the counſel-chamber of the judges:) and upon deliberation they gave a grave and ſafe opinion and advice, mixed with law and convenience; which was, that the knights and burgeſſes attainted by the courſe of law, ſhould forbear to come into the houſe, till a law were paſſed for the reverſal of their attainders.

It was at that time incidently moved amongſt the judges in their conſultation, what ſhould be done for the king himſelf, who likewiſe was attainted? But it was with unanimous conſent reſolved, that the crown takes away all defects and ſtops in blood: and that from the time the king did aſſume the crown, the fountain was cleared, and all attainders and corruption of blood diſcharged. But nevertheleſs, for honour's ſake, it was ordained by parliament, that all records wherein there was any memory, or mention of the king's attainder, ſhould be defaced, cancelled, and taken off the file.

But on the part of the king's enemies there were by parliament attainted, the late duke of *Glouceſter*, calling himſelf *Richard* the third; the duke of *Norfolk*, the earl of *Surrey*, viſcount *Lovel*, the lord *Ferrars*, the lord *Zouch*, *Richard Ratcliffe*, *William Cateſby*, and many others of degree and quality. In which bills of attainders, nevertheleſs there were contained many juſt and temperate clauſes, ſavings and proviſoes, well ſhewing and fore-tokening the wiſdom, ſtay, and moderation of the king's ſpirit of government. And for the pardon of the reſt, that had ſtood againſt the king, the king, upon a ſecond advice, thought it not fit it ſhould paſs by parliament, the better (being matter of grace) to impropriate the thanks to himſelf: uſing only the opportunity of a parliament time, the better to diſperſe it into the veins of the kingdom. Therefore during the parliament, he publiſhed his royal proclamation, offering pardon and grace of reſtitution, to all ſuch as had taken arms, or been participant of any attempts againſt him; ſo as they ſubmitted themſelves to his mercy by a day, and took the oath of allegiance and fidelity to him. Whereupon many came out of ſanctuary, and many more came out of fear, no leſs guilty than thoſe that had taken ſanctuary.

As for money or treaſure, the king thought it not ſeaſonable, or fit to demand any of his ſubjects at this parliament; both becauſe he had received ſatisfaction from them in matters of ſo great importance, and becauſe he could not remunerate them with any general pardon, being prevented therein by the coronation pardon, paſſed immediately before: but chiefly, for that it was in every man's eye, what great forfeitures and confiſcations he had at that preſent to help himſelf; whereby thoſe caſualties of the crown might in reaſon ſpare the purſes of the ſubjects; eſpecially in a time when he was in peace with all his neighbours. Some few laws paſſed at that parliament, almoſt for form ſake: amongſt which there was one, to reduce aliens, being made denizens, to pay ſtrangers cuſtoms; and another, to draw to himſelf the ſeizures and compoſitions of *Italians* goods, for not employment, being points of profit to his coffers, whereof from the very beginning he was not forgetful; and had been more happy at the latter end, if his early providence (which kept him from all neceſſity of exacting upon his people) could likewiſe have attempered his nature therein. He added, during parliament, to his former creations, the innoblement or advancement

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in nobility of a few others; the lord *Chandois* of *Britain*, was made earl of *Bath*; ſir *Giles Daubeney*, was made lord *Daubeney*; and ſir *Robert Willoughby*, lord *Brook*.

THE king did alſo with great nobleneſs and bounty (which virtues at that time had their turns in his nature) reſtore *Edward Stafford* (eldeſt ſon to *Henry* duke of *Buckingham*, attainted in the time of king *Richard)* not only to his dignities, but to his fortunes and poſſeſſions, which were great: to which he was moved alſo by a kind of gratitude, for that the duke was the man that moved the firſt ſtone againſt the tyranny of king *Richard*, and indeed made the king a bridge to the crown upon his own ruins. Thus the parliament broke up.

THE parliament being diſſolved, the king ſent forthwith money to redeem the marquis *Dorſet*, and ſir *John Bourchier*, whom he had left as his pledges at *Paris*, for money which he had borrowed, when he made his expedition for *England*. And therefore he took a fit occaſion to ſend the lord treaſurer and maſter *Bray* (whom he uſed as counſellor) to the lord mayor of *London*, requiring of the city a preſt of ſix thouſand marks: but after many parleys, he could obtain but two thouſand pounds; which nevertheleſs the king took in good part, as men uſe to do, that practiſe to borrow money when they have no need. About this time, the king called unto his privy-council *John Morton* and *Richard Fox*, the one biſhop of *Ely*, the other biſhop of *Exeter*; vigilant men and ſecret, and ſuch as kept watch with him almoſt upon all men elſe. They had been both verſed in his affairs, before he came to the crown, and were partakers of his adverſe fortune. This *Morton* ſoon after, upon the death of *Bourchier*, he made archbiſhop of *Canterbury*. And for *Fox*, he made him lord keeper of his privy-ſeal, and afterwards advanced him by degrees, from *Exeter* to *Bath* and *Wells*, thence to *Durham*, and at laſt, to *Winchester*. For although the king loved to employ and advance biſhops, becauſe having rich biſhopricks, they carried their reward upon themſelves; yet he did uſe to raiſe them by ſteps, that he might not loſe the profit of the firſt fruits, which by that courſe of gradation was multiplied.

AT laſt, upon the eighteenth of *January*, was ſolemnized the ſo long expected and ſo much deſired marriage, between the king and the lady *Elizabeth*: which day of marriage was celebrated with greater triumph and demonſtrations (eſpecially on the people's part) of joy and gladneſs, than the days either of his entry or coronation; which the king rather noted, than liked. And it is true, that all his life time, while the lady *Elizabeth* lived with him, (for ſhe died before him) he ſhewed himſelf no very indulgent huſband towards her, though ſhe was beautiful, gentle, and fruitful. But his averſion towards the houſe of *York* was ſo predominant in him, as it found place, not only in his wars and councils, but in his chamber and bed.

TOWARDS the middle of the ſpring, the king, full of confidence and aſſurance, as a prince that had been victorious in battle, and had prevailed with his parliament in all that he deſired, and had the ring of acclamations freſh in his ears, thought the reſt of his reign ſhould be but play, and the enjoying of a kingdom: Yet as a wiſe and watchful king, he would not neglect any thing for his ſafety; thinking nevertheleſs to perform all things now, rather as an exerciſe, than as a labour. So he being truly informed, that the northern parts were not only affectionate to the houſe of *York*, but particularly had been devoted to king *Richard* the third; thought it would

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be a ſummer well ſpent to viſit thoſe parts, and by his preſence and application of himſelf, to reclaim and rectify thoſe humours. But the king, in his account of peace and calms, did much over-caſt his fortunes, which proved for many years together full of broken ſeas, tides and tempeſts. For he was no ſooner come to *Lincoln*, where he kept his *Eaſter*, but he received news, that the lord *Lovel*, *Humphrey Stafford*, and *Thomas Stafford*, (who had formerly taken ſanctuary at *Colcheſter*) were departed out of ſanctuary, but to what place, no man could tell: Which advertiſement the king deſpiſed, and continued his journey to *York*. At *York* there came freſh and more certain advertiſement, that the lord *Lovel* was at hand with a great power of men, and that the *Staffords* were in arms in *Worceſterſhire*, and had made their approaches to the city of *Worceſter*, to aſſail it. The king, as a prince of great and profound judgment, was not much moved with it; for that he thought it was but a rag or remnant of *Boſworth-field*, and had nothing in it of the main party of the houſe of *York*. But he was more doubtful of the raiſing of forces to reſiſt the rebels, than of the reſiſtance itſelf; for that he was in a core of people, whoſe affections he ſuſpected. But the action enduring no delay, he did ſpeedily levy and ſend againſt the lord *Lovel*, to the number of three thouſand men, ill armed, but well aſſured, (being taken ſome few out of his own train, and the reſt out of the tenants and followers of ſuch as were ſafe to be truſted) under the conduct of the duke of *Bedford*. And as his manner was to ſend his pardons rather before the ſword than after, he gave commiſſion to the duke to proclaim pardon to all that would come in: which the duke, upon his approach to the lord *Lovel*'s camp, did perform. And it fell out as the king expected; the heralds were the great ordnance. For the lord *Lovel*, upon proclamation of pardon, miſtruſting his men, fled into *Lancaſhire*, and lurking for a time with ſir *Thomas Broughton*, after ſailed over into *Flanders* to the lady *Margaret*. And his men, forſaken of their captain, did preſently ſubmit themſelves to the duke. The *Staffords* likewiſe, and their forces, hearing what had happen'd to the lord *Lovel* (in whoſe ſucceſs their chief truſt was) deſpaired, and diſperſed. The two brothers taking ſanctuary at *Colnham*, a village near *Abingdon*; which place, upon view of their privilege in the king's bench, being judged no ſufficient ſanctuary for traytors, *Humphrey* was executed at *Tyburn*; and *Thomas*, as being led by his elder brother, was pardoned. So this rebellion proved but a blaſt, and the king having by this journey purged a little the dregs and leaven of the northern people, that were before in no good affection towards him, returned to *London*.

In *September* following, the queen was delivered of her firſt ſon, whom the king (in honour of the *Britiſh* race, of which himſelf was) named *Arthur*, according to the name of that ancient worthy king of the *Britains*, in whoſe acts there is truth enough to make him famous, beſides that which is fabulous. The child was ſtrong and able, though he was born in the eighth month, which the phyſicians do prejudge.

There followed this year, being the ſecond of the king's reign, a ſtrange accident of ſtate, whereof the relations which we have are ſo naked, as they leave it ſcarce credible; not for the nature of it, (for it hath fallen out often) but for the manner and circumſtance of it, eſpecially in the beginnings. Therefore we ſhall make our judgment upon the things themſelves, as they give light one to another, and (as we can) dig truth out of the mine. The king was green in his eſtate; and contrary to his own opinion and deſert

ſert both, was not without much hatred throughout the realm. The root of all, was the diſcountenancing of the houſe of *York*, which the general body of the realm ſtill affected. This did alienate the hearts of the ſubjects from him daily more and more, eſpecially when they ſaw, that after his marriage, and after a ſon born, the king did nevertheleſs not ſo much as proceed to the coronation of the queen, not vouchſafing her the honour of a matrimonial crown; for the coronation of her was not till almoſt two years after, when danger had taught him what to do. But much more when it was ſpread abroad, (whether by error, or the cunning of male-contents) that the king had a purpoſe to put to death *Edward Plantagenet* cloſely in the tower: whoſe caſe was ſo nearly parallel'd with that of *Edward* the fourth's children, in reſpect of the blood, like age, and the very place of the tower, as it did refreſh and reflect upon the king a moſt odious reſemblance, as if he would be another king *Richard*. And all this time it was ſtill whiſpered every where, that at leaſt one of the children of *Edward* the fourth was living: Which bruit was cunningly fomented by ſuch as deſired innovation. Neither was the king's nature and cuſtoms greatly fit to diſperſe theſe miſts; but contrariwiſe, he had a faſhion rather to create doubts than aſſurance. Thus was fuel prepared for the ſpark: The ſpark that afterwards kindled ſuch a fire and combuſtion, was at the firſt contemptible.

THERE was a ſubtile prieſt called *(a) Richard Simon*, that lived in *Oxford*, and had to his pupil a baker's ſon, named *Lambert Simnell*, of the age of ſome fifteen years, a comely youth, and well favoured, not without ſome extraordinary dignity, and grace of aſpect. It came into this prieſt's fancy, (hearing what men talked, and in hope to raiſe himſelf to ſome great biſhoprick) to cauſe this lad to counterfeit and perſonate the ſecond ſon of *Edward* the fourth, ſuppoſed to be murdered; and afterward (for he changed his intention in the manage) the lord *Edward Plantagenet*, then priſoner in the tower, and accordingly to frame him and inſtruct him in the part he was to play. This is that which (as was touched before) ſeemeth ſcarcely credible; not that a falſe perſon ſhould be aſſumed to gain a kingdom, for it hath been ſeen in ancient and late times; nor that it ſhould come into the mind of ſuch an abject fellow, to enterprize ſo great a matter; for high conceits do ſometimes come ſtreaming into the imaginations of baſe perſons; eſpecially when they are drunk with news, and talk of the people. But here is that which hath no appearance: That this prieſt being utterly unacquainted with the true perſon, according to whoſe pattern he ſhould ſhape his counterfeit, ſhould think it poſſible for him to inſtruct his player, either in geſture and faſhions, or in recounting paſt matters of his life and education; or in fit anſwers to queſtions, or the like, any ways to come near the reſemblance of him whom he was to repreſent. For this lad was not to perſonate one, that had been long before taken out of his cradle, or conveyed away in his infancy, known to few; but a youth, that till the age almoſt of ten years, had been brought up in a court where infinite eyes had been upon him. For king *Edward* touched with remorſe of his brother the duke of *Clarence*'s death, would not indeed reſtore his ſon (of whom we ſpeak) to be duke of *Clarence*, but yet created him earl of *Warwick*, reviving his honour on the mother's ſide, and uſed him honourably

*(a)* The prieſt's name was *William Simonds*, and the youth was the ſon of . . . . . an organ-maker in *Oxford*, as the prieſt declared before the whole convocation of the clergy at *Lambeth*, *Feb.* 17. 1486. *Vide Reg. Morton. f.* 34. *MS. Sancroft.*

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during his time, though *Richard* the third afterwards confined him. So that it cannot be, but that ſome great perſon that knew particularly and familiarly *Edward Plantagenet*, had a hand in the buſineſs, from whom the prieſt might take his aim. That which is moſt probable, out of the precedent and ſubſequent acts, is, that it was the queen dowager, from whom this action had the principal ſource and motion. For certain it is, ſhe was a buſy negotiating woman, and in her withdrawing chamber had the fortunate conſpiracy for the king againſt king *Richard* the third been hatched; which the king knew, and remembred perhaps but too well; and was at this time extremely diſcontent with the king, thinking her daughter (as the king handled the matter) not advanced, but depreſſed: and none could hold the book ſo well to prompt and inſtruct this ſtage-play, as ſhe could. Nevertheleſs it was not her meaning, nor no more was it the meaning of any of the better and ſager ſort that favoured this enterprize, and knew the ſecret, that this diſguiſed idol ſhould poſſeſs the crown; but at his peril to make way to the overthrow of the king; and that done, they had their ſeveral hopes and ways. That which doth chiefly fortify this conjecture is, that as ſoon as the matter brake forth in any ſtrength, it was one of the king's firſt acts to cloiſter the queen dowager in the nunnery of *Bermondſey*, and to take away all her lands and eſtate; and this by a cloſe council, without any legal proceeding, upon far fetch'd pretences; that ſhe had delivered her two daughters out of ſanctuary to king *Richard*, contrary to promiſe. Which proceeding being even at that time taxed for rigorous and undue, both in matter and manner, makes it very probable there was ſome greater matter againſt her, which the king upon reaſon of policy, and to avoid envy, would not publiſh. It is likewiſe no ſmall argument that there was ſome ſecret in it, and ſome ſuppreſſing of examinations; for that the prieſt *Simon* himſelf, after he was taken, was never brought to execution: no not ſo much as to publick trial (as many clergymen were upon leſs treaſons;) but was only ſhut up cloſe in a dungeon. Add to this, that after the earl of *Lincoln* (a principal perſon of the houſe of *York*) was ſlain in *Stokefield*, the king opened himſelf to ſome of his council, that he was ſorry for the earl's death, becauſe by him (he ſaid) he might have known the bottom of his danger.

But to return to the narration itſelf: *Simon* did firſt inſtruct his ſcholar for the part of *Richard* duke of *York*, ſecond ſon to king *Edward* the fourth; and this was at ſuch time as it was voiced, that the king purpoſed to put to death *Edward Plantagenet* priſoner in the tower, whereat there was great murmur. But hearing ſoon after a general bruit, that *Plantagenet* had eſcaped out of the tower, and thereby finding him ſo much beloved amongſt the people, and ſuch rejoicing at his eſcape, the cunning prieſt changed his copy, and choſe now *Plantagenet* to be the ſubject his pupil ſhould perſonate, becauſe he was more in the preſent ſpeech and votes of the people; and it pieced better, and followed more cloſe and handſomely, upon the bruit of *Plantagenet*'s eſcape. But yet doubting that there would be too near looking, and too much perſpective into his diſguiſe, if he ſhould ſhew it here in *England*; he thought good (after the manner of ſcenes in ſtage-plays and maſks) to ſhew it afar off; and therefore ſailed with his ſcholar into *Ireland*, where the affection to the houſe of *York* was moſt in height. The king had been a little improvident in the matters of *Ireland*, and had not removed officers and counſellors, and put in their places, or at leaſt intermingled perſons, of whom he ſtood aſſured, as he ſhould

ſhould have done, ſince he knew the ſtrong bent of that country towards the houſe of *York*; and that it was a tickliſh and unſettled ſtate, more eaſy to receive diſtempers and mutations, than *England* was. But truſting to the reputation of his victories and ſucceſſes in *England*, he thought he ſhould have time enough to extend his cares afterwards to that ſecond kingdom.

Wherefore through this neglect, upon the coming of *Simon* with his pretended *Plantagenet* into *Ireland*, all things were prepared for revolt and ſedition, almoſt as if they had been ſet and plotted beforehand. *Simon*'s firſt addreſs was to the lord *Thomas Fitz-Gerard*, earl of *Kildare*, and deputy of *Ireland*; before whoſe eyes he did caſt ſuch a miſt (by his own inſinuation, and by the carriage of his youth, that expreſſed a natural princely behaviour) as joined perhaps with ſome inward vapours of ambition and affection in the earl's own mind, left him fully poſſeſſed, that it was the true *Plantagenet*. The earl preſently communicated the matter with ſome of the nobles, and others there, at the firſt ſecretly; but finding them of like affection to himſelf, he ſuffered it of purpoſe to vent and paſs abroad; becauſe they thought it not ſafe to reſolve, till they had a taſte of the people's inclination. But if the great ones were in forwardneſs, the people were in fury, entertaining this airy body or phantaſm with incredible affection; partly, out of their great devotion to the houſe of *York*; partly out of a proud humour in the nation, to give a king to the realm of *England*. Neither did the party in this heat of affection, much trouble themſelves with the attainder of *George* duke of *Clarence*; having newly learned by the king's example, that attainders do not interrupt the conveying of title to the crown. And as for the daughters of king *Edward* the fourth, they thought king *Richard* had ſaid enough for them; and took them to be but as of the king's party, becauſe they were in his power, and at his diſpoſing. So that with marvellous conſent and applauſe, this counterfeit *Plantagenet* was brought with great ſolemnity, to the caſtle of *Dublin*, and there ſaluted, ſerved, and honoured as king; the boy becoming it well, and doing nothing that did bewray the baſeneſs of his condition. And within a few days after he was proclaimed king at *Dublin*, by the name of king *Edward* the ſixth; there being not a ſword drawn in king *Henry* his quarrel.

The king was much moved with this unexpected accident when it came to his ears, both becauſe it ſtruck upon that ſtring which ever he moſt feared, as alſo becauſe it was ſtirred in ſuch a place, where, he could not with ſafety transfer his own perſon to ſuppreſs it. For partly through natural valour, and partly through an univerſal ſuſpicion, (not knowing whom to truſt) he was ever ready to wait upon all his atchievements in perſon. The king therefore firſt called his counſel together at the charter-houſe at *Shine*; which counſel was held with great ſecrecy, but the open decrees thereof, which preſently came abroad, were three.

The firſt was, that the queen dowager, for that ſhe, contrary to her pact and agreement with thoſe that had concluded with her concerning the marriage of her daughter *Elizabeth* with king *Henry*, had nevertheleſs delivered her daughters out of ſanctuary into king *Richard*'s hands, ſhould be cloiſtered in the nunnery of *Bermondſey*, and forfeit all her lands and goods.

The next was, that *Edward Plantagenet*, then cloſe priſoner in the tower, ſhould be in the moſt publick and notorious manner that could be deviſed, ſhewed unto the people: in part to diſcharge the king of the envy of that opinion and bruit, how he had been put to death privily in the

tower; but chiefly to make the people ſee the levity and impoſture of the proceedings of *Ireland*, and that their *Plantagenet* was indeed but a puppit or a counterfeit.

THE third was, that there ſhould be again proclaimed a general pardon to all that would reveal their offences, and ſubmit themſelves by a day. And that this pardon ſhould be conceived in ſo ample and liberal a manner, as no high-treaſon (no not againſt the king's own perſon) ſhould be excepted. Which though it might ſeem ſtrange, yet was it not ſo to a wiſe king, that knew his greateſt dangers were not from the leaſt treaſons, but from the greateſt. Theſe reſolutions of the king and the council were immediately put in execution. And firſt, the queen dowager was put into the monaſtery of *Bermondſey*, and all her eſtates ſeized into the king's hands: whereat there was much wondering; that a weak woman, for the yielding to the menaces and promiſes of a tyrant, after ſuch a diſtance of time, (wherein the king had ſhewed no diſpleaſure nor alteration) but much more after ſo happy a marriage between the king and her daughter, bleſſed with iſſue male, ſhould, upon a ſudden mutability or diſcloſure of the king's mind, be ſo ſeverely handled.

THIS lady was amongſt the examples of great variety of fortune. She had firſt from a diſtreſſed ſuitor, and deſolate widow, been taken to the marriage-bed of a batchelor-king, the goodlieſt perſonage of his time; and even in his reign ſhe had endured a ſtrange eclipſe by the king's flight, and temporary depriving from the crown. She was alſo very happy, in that ſhe had by him fair iſſue; and continued his nuptial love (helping her ſelf by ſome obſequious bearing and diſſembling of his pleaſures) to the very end. She was much affectionate to her own kindred, even unto faction; which did ſtir great envy in the lords of the king's ſide, who counted her blood a diſparagement to be mingled with the king's. With which lords of the king's blood, joined alſo the king's favourite, the lord *Haſtings*; who, notwithſtanding the king's great affection to him, was thought at times, through her malice and ſpleen, not to be out of danger of falling. After her huſband's death ſhe was matter of tragedy, having lived to ſee her brother beheaded, and her two ſons depoſed from the crown, baſtarded in their blood, and cruelly murdered. All this while nevertheleſs ſhe enjoyed her liberty, ſtate, and fortunes: But afterwards again, upon the riſe of the wheel, when ſhe had a king to her ſon in law, and was made grandmother to a grandchild of the beſt ſex; yet was ſhe (upon dark and unknown reaſons, and no leſs ſtrange pretences) precipitated and baniſhed the world into a nunnery; where it was almoſt thought dangerous to viſit her, or ſee her; and where not long after ſhe ended her life: but was by the king's commandment buried with the king her huſband at *Windſor*. She was foundreſs of *Queen*'s college in *Cambridge*. For this act the king ſuſtained great obloquy, which nevertheleſs (beſides the reaſon of ſtate) was ſomewhat ſweetned to him by a great confiſcation.

ABOUT this time alſo, *Edward Plantagenet* was upon a ſunday brought throughout all the principal ſtreets of *London*, to be ſeen of the people. And having paſſed the view of the ſtreets, was conducted to *Paul*'s church in ſolemn proceſſion, where great ſtore of people were aſſembled. And it was provided alſo in good faſhion, that divers of the nobility, and others of quality, (eſpecially of thoſe that the king moſt ſuſpected, and knew the perſon of *Plantagenet* beſt) had communication with the young gentleman by the way, and entertained him with ſpeech and diſcourſe; which did in effect

effect mar the pageant in *Ireland* with the ſubjects here, at leaſt with ſo many, as out of error, and not out of malice, might be miſled. Nevertheleſs, in *Ireland*, (where it was too late to go back) it wrought little or no effect. But contrariwiſe, they turned the impoſture upon the king; and gave out, that the king to defeat the true inheritor, and to mock the world, and blind the eyes of ſimple men, had tricked up a boy in the likeneſs of *Edward Plantagenet*, and ſhewed him to the people; not ſparing to profane the ceremony of a proceſſion, the more to countenance the fable.

The general pardon likewiſe near the ſame time came forth; and the king therewithal omitted no diligence, in giving ſtrait order for the keeping of the ports, that fugitives, malecontents, or ſuſpected perſons, might not paſs over into *Ireland* and *Flanders*.

Mean while the rebels in *Ireland* had ſent privy meſſengers both into *England*, and into *Flanders*, who in both places had wrought effects of no ſmall importance. For in *England* they won to their party *John* earl of *Lincoln*, ſon of *John de la Pool* duke of *Suffolk*, and of *Elizabeth*, king *Edward* the fourth's eldeſt ſiſter. This earl was a man of great wit and courage, and had his thoughts highly raiſed by hopes and expectations for a time: for *Richard* the third had a reſolution, out of his hatred to both his brethren, king *Edward*, and the duke of *Clarence*, and their lines, (having had his hand in both their bloods) to diſable their iſſues upon falſe and incompetent pretexts; the one of attainder, the other of illegitimation: and to deſign this gentleman (in caſe himſelf ſhould die without children) for inheritor of the crown. Neither was this unknown to the king, who had ſecretly an eye upon him. But the king having taſted of the envy of the people for his impriſonment of *Edward Plantagenet*, was doubtful to heap up any more diſtaſtes of that kind, by the impriſonment of *de la Pool* alſo; the rather thinking it policy to conſerve him as a corrival unto the other. The earl of *Lincoln* was induced to participate with the action of *Ireland*, not lightly upon the ſtrength of the proceedings there, which was but a bubble, but upon letters from the lady *Margaret* of *Burgundy*, in whoſe ſuccours and declaration for the enterprize, there ſeemed to be a more ſolid foundation, both for reputation and forces. Neither did the earl refrain the buſineſs, for that he knew the pretended *Plantagenet* to be but an idol. But contrariwiſe, he was more glad it ſhould be the falſe *Plantagenet*, than the true; becauſe the falſe being ſure to fall away of himſelf, and the true to be made ſure of by the king, it might open and pave a fair and prepared way to his own title. With this reſolution he ſailed ſecretly into *Flanders*, where was a little before arrived the lord *Lovel*, leaving a correſpondence here in *England* with ſir *Thomas Broughton*, a man of great power and dependances in *Lancaſhire*. For before this time, when the pretended *Plantagenet* was firſt received in *Ireland*, ſecret meſſengers had been alſo ſent to the lady *Margaret*, advertiſing her what had paſſed in *Ireland*, imploring ſuccours in an enterprize (as they ſaid) ſo pious and juſt, and that God had ſo miraculouſly proſpered the beginning thereof; and making offer, that all things ſhould be guided by her will and direction, as the ſovereign patroneſs and protectreſs of the enterprize. *Margaret* was ſecond ſiſter to king *Edward* the fourth, and had been ſecond wife to *Charles*, ſirnamed the Hardy, duke of *Burgundy*; by whom, having no children of her own, ſhe did with ſingular care and tenderneſs intend the education of *Philip* and *Margaret*, grandchildren to her former huſband; which won her great love and authority among the *Dutch*. This princeſs (having the ſpirit of a man,

and malice of a woman) abounding in treaſure, by the greatneſs of her dower, and her provident government, and being childleſs, and without any nearer care, made it her deſign and enterprize, to ſee the majeſty royal of *England* once again replaced in her houſe; and had ſet up king *Henry* as a mark, at whoſe overthrow all her actions ſhould aim and ſhoot; inſomuch as all the councils of his ſucceeding troubles came chiefly out of that quiver. And ſhe bare ſuch a mortal hatred to the houſe of *Lancaſter*, and perſonally to the king, as ſhe was no ways mollified by the conjunction of the houſes in her niece's marriage, but rather hated her niece, as the means of the king's aſcent to the crown, and aſſurance therein. Wherefore with great violence of affection ſhe embraced this overture. And upon counſel taken with the earl of *Lincoln*, and the lord *Lovel*, and ſome other of the party, it was reſolved with all ſpeed, the two lords, aſſiſted with a regiment of two thouſand *Almains*, being choice and veteran bands, under the command of *Martin Swart*, (a valiant and experimented captain) ſhould paſs over into *Ireland* to the new king; hoping, that when the action ſhould have the face of a received and ſettled regality (with ſuch a ſecond perſon as the earl of *Lincoln*, and the conjunction and reputation of foreign ſuccours) the fame of it would embolden and prepare all the party of the confederates and malecontents within the realm of *England*, to give them aſſiſtance when they ſhould come over there. And for the perſon of the counterfeit, it was agreed, that if all things ſucceeded well, he ſhould be put down, and the true *Plantagenet* received; wherein nevertheleſs the earl of *Lincoln* had his particular hopes. After they were come into *Ireland*, and that the party took courage, by ſeeing themſelves together in a body, they grew very confident of ſucceſs; conceiving and diſcourſing amongſt themſelves, that they went in upon far better cards to overthrow king *Henry*, than king *Henry* had to overthrow king *Richard*. And that if there were not a ſword drawn againſt them in *Ireland*, it was a ſign the ſwords in *England* would be ſoon ſheathed, or beaten down. And firſt, for a bravery upon this acceſſion of power, they crowned their new king in the cathedral church of *Dublin*; who formerly had been but proclaimed only; and then ſate in council what ſhould farther be done. At which council, though it were propounded by ſome, that it were the beſt way to eſtabliſh themſelves firſt in *Ireland*, and to make that the ſeat of the war, and to draw king *Henry* thither in perſon, by whoſe abſence they thought there would be great alterations and commotions in *England*; yet becauſe the kingdom there was poor, and they ſhould not be able to keep their army together, nor pay their *German* ſoldiers, and for that alſo the ſway of the *Iriſhmen*, and generally of the men of war, which (as in ſuch caſes of popular tumults is uſual) did in effect govern their leaders, was eager, and in affection to make their fortunes upon *England*; it was concluded with all poſſible ſpeed to tranſport their forces into *England*. The king in the mean time, who at the firſt when he heard what was done in *Ireland*, though it troubled him, yet thought he ſhould be well enough able to ſcatter the *Iriſh* as a flight of birds, and rattle away this ſwarm of bees with their king; when he heard afterwards that the earl of *Lincoln* was embarked in the action, and that the lady *Margaret* was declared for it; he apprehended the danger in a true degree as it was, and ſaw plainly that his kingdom muſt again be put to the ſtake, and that he muſt fight for it. And firſt he did conceive, before he underſtood of the earl of *Lincoln*'s ſailing into *Ireland* out of *Flanders*, that he ſhould be aſſailed both upon the eaſt parts of the kingdom of *England*,

*land*, by ſome impreſſion from *Flanders*; and upon the north-weſt out of *Ireland*. And therefore having ordered muſters to be made in both parts, and having proviſionally deſigned two generals, *Jaſper* earl of *Bedford*, and *John* earl of *Oxford*, (meaning himſelf alſo to go in perſon where the affairs ſhould moſt require it) and nevertheleſs not expecting any actual invaſion at that time, (the winter being far on) he took his journey himſelf towards *Suffolk* and *Norfolk*, for the confirming of thoſe parts. And being come to St. *Edmond's-bury*, he underſtood, that *Thomas* marquis *Dorſet* (who had been one of the pledges in *France)* was haſting towards him, to purge himſelf of ſome accuſations which had been made againſt him. But the king, though he kept an ear for him, yet was the time ſo doubtful, that he ſent the earl of *Oxford* to meet him, and forthwith to carry him to the tower; with a fair meſſage nevertheleſs, that he ſhould bear that diſgrace with patience, for that the king meant not his hurt, but only to preſerve him from doing hurt, either to the king's ſervice, or to himſelf; and that the king ſhould always be able (when he had cleared himſelf) to make him reparation.

From *St. Edmond's-bury* he went to *Norwich*, where he kept his *Chriſtmas*. And from thence he went (in a manner of pilgrimage) to *Walſingham*, where he viſited our lady's church, famous for miracles, and made his prayers and vows for help and deliverance. And from thence he returned by *Cambridge* to *London*. Not long after the rebels, with their king, (under the leading of the earl of *Lincoln*, the earl of *Kildare*, the lord *Lovel*, and colonel *Swart)* landed at *Fouldrey* in *Lancaſhire*; whither there repaired to them ſir *Thomas Broughton*, with ſome ſmall company of *Engliſh*. The king by that time (knowing now the ſtorm would not divide, but fall in one place) had levied forces in good number; and in perſon (taking with him his two deſigned generals, the duke of *Bedford*, and the earl of *Oxford)* was come on his way towards them as far as *Coventry*, whence he ſent forth a troop of light horſemen for diſcovery, and to intercept ſome ſtraglers of the enemies, by whom he might the better underſtand the particulars of their progreſs and purpoſes, which was accordingly done; though the king otherwiſe was not without intelligence from eſpials in the camp.

The rebels took their way toward *York*, without ſpoiling the countrey, or any act of hoſtility, the better to put themſelves into favour of the people, and to perſonate their king: who (no doubt, out of a princely feeling) was ſparing, and compaſſionate towards his ſubjects; but their ſnow-ball did not gather as it went: for the people came not in to them; neither did any riſe or declare themſelves in other parts of the kingdom for them, which was cauſed partly by the good taſte that the king had given his people of his government, joined with the reputation of his felicity; and partly for that it was an odious thing to the people of *England*, to have a king brought in to them upon the ſhoulders of *Iriſh* and *Dutch*, of which their army was in ſubſtance compounded. Neither was it a thing done with any great judgment on the party of the rebels, for them to take their way towards *York:* conſidering that howſoever thoſe parts had formerly been a nurſery of their friends; yet it was there, where the lord *Lovel* had ſo lately diſbanded, and where the king's preſence had a little before qualified diſcontents. The earl of *Lincoln* deceived of his hopes of the countries concourſe unto him, (in which caſe he would have temporized) and ſeeing the buſineſs paſt retraict, reſolved to make on where the king was, and to give him battel; and thereupon marched towards *Newark*, thinking to have ſurprized

ſurprized the town. But the king was ſomewhat before this time come to *Nottingham*, where he called a council of war, at which was conſulted whether it were beſt to protract time, or ſpeedily to ſet upon the rebels. In which council the king himſelf (whoſe continual vigilancy did ſuck in ſometimes cauſeleſs ſuſpicions, which few elſe knew) inclined to the accelerating a battel: but this was preſently put out of doubt, by the great aids that came in to him in the inſtant of this conſultation, partly upon miſſives, and partly voluntaries, from many parts of the kingdom.

The principal perſons that came then to the king's aid, were the earl of *Shrewſbury*, and the lord *Strange* of the nobility; and of knights and gentlemen, to the number of at leaſt threeſcore and ten perſons, with their companies, making in the whole, at the leaſt, ſix thouſand fighting men, beſides the forces that were with the king before. Whereupon the king, finding his army ſo bravely re-inforced, and a great alacrity in all his men to fight, was confirmed in his former reſolution, and marched ſpeedily, ſo as he put himſelf between the enemies camp and *Newark*; being loth their army ſhould get the commodity of that town. The earl nothing diſmay'd, came forwards that day unto a little village called *Stoke*, and there encamped that night, upon the brow or hanging of a hill. The king the next day preſented him battel upon the plain, the fields there being open and champion. The earl couragiouſly came down and joined battel with him. Concerning which battel, the relations that are left unto us are ſo naked and negligent, (though it be an action of ſo recent memory) as they rather declare the ſucceſs of the day, than the manner of the fight. They ſay, that the king divided his army into three battails; whereof the vant-guard only, well ſtrengthened with wings, came to fight. That the fight was fierce and obſtinate, and laſted three hours, before the victory inclined either way; ſave that judgment might be made, but that the king's vant-guard of it ſelf maintained fight againſt the whole power of the enemies, (the other two battails remaining out of action) what the ſucceſs was like to be in the end. That *Martin Swart* with his *Germans* perform'd bravely, and ſo did thoſe few *Engliſh* that were on that ſide; neither did the *Iriſh* fail in courage or fierceneſs; but being almoſt naked men, only armed with darts and ſkains, it was rather an execution than a fight upon them; inſomuch as the furious ſlaughter of them was a great diſcouragement and appalement to the reſt; that there died upon the place all the chieftains; that is, the earl of *Lincoln*, the earl of *Kildare*, *Frances* lord *Lovel*, *Martin Swart*, and ſir *Thomas Broughton*; all making good the fight, without any ground given. Only of the lord *Lovel* there went a report, that he fled and ſwam over *Trent* on horſeback, but could not recover the farther ſide, by reaſon of the ſteepneſs of the bank, and ſo was drowned in the river. But another report leaves him not there, but that he lived long after in a cave or vault. The number that was ſlain in the field, was of the enemies part four thouſand at the leaſt; and of the king's part, one half of his vant-guard, beſides many hurt, but none of name. There were taken priſoners, amongſt others, the counterfeit *Plantagenet*, (now *Lambert Simnell* again) and the crafty prieſt his tutor. For *Lambert*, the king would not take his life, both out of magnanimity, taking him but as an image of wax, that others had tempered and moulded: and likewiſe out of wiſdom, thinking that if he ſuffer'd death, he would be forgotten too ſoon; but being kept alive, he would be a continual ſpectacle, and a kind of remedy againſt the like inchantments of people in time to come. For which cauſe he was taken into ſervice in his court

court to a baſe office in his kitchen; ſo that (in a kind of *mattacina* of human fortune) he turned a broach, that had worn a crown; whereas fortune commonly doth not bring in a comedy or farce after a tragedy. And afterwards he was preferred to be one of the king's falconers. As to the prieſt, he was committed cloſe priſoner, and heard of no more; the king loving to ſeal up his own dangers.

After the battel the king went to *Lincoln*, where he cauſed ſupplications and thankſgivings to be made for his deliverance and victory. And that his devotions might go round in circle, he ſent his banner to be offered to our lady of *Walſingham*, where before he made his vows. And thus delivered of this ſo ſtrange an engine, and new invention of fortune, he returned to his former confidence of mind, thinking now, that all his misfortunes had come at once. But it fell out unto him according to the ſpeech of the common people in the beginning of his reign, that ſaid, it was a token he ſhould reign in labour, becauſe his reign began with a ſickneſs of ſweat. But howſoever the king thought himſelf now in a haven, yet ſuch was his wiſdom, as his confidence did ſeldom darken his foreſight, eſpecially in things near hand. And therefore awakened by ſo freſh and unexpected dangers, he enter'd into due conſideration, as well how to weed out the partakers of the former rebellion, as to kill the ſeeds of the like in time to come: and withal to take away all ſhelters and harbours for diſcontented perſons, where they might hatch and foſter rebellions, which afterwards might gather ſtrength and motion. And firſt, he did yet again make a progreſs from *Lincoln* to the northern parts, though it were indeed rather an itinerary circuit of juſtice, than a progreſs. For all along as he went, with much ſeverity and ſtrict inquiſition, partly by martial law, and partly by commiſſion, were puniſhed, the adherents and aiders of the late rebels. Not all by death, (for the field had drawn much blood) but by fines and ranſoms, which ſpared life, and raiſed treaſure. Amongſt other crimes of this nature, there was diligent enquiry made of ſuch as had raiſed and diſperſed a bruit and rumour, a little before the field fight, that the rebels had the day; and that the king's army was overthrown, and the king fled. Whereby it was ſuppoſed that many ſuccours, which otherwiſe would have come to the king, were cunningly put off, and kept back. Which charge and accuſation, though it had ſome ground, yet it was induſtriouſly embraced and put on by divers, who having been in themſelves not the beſt affected unto the king's part, nor forward to come to his aid, were glad to apprehend this colour to cover their neglect and coldneſs, under the pretence of ſuch diſcouragements. Which cunning nevertheleſs the king would not underſtand, though he lodged it, and noted it in ſome particulars, as his manner was.

But for the extirpating of the roots and cauſes of the like commotions in time to come, the king began to find where his ſhoe did wring him, and that it was his depreſſing of the houſe of *York* that did rankle and feſter the affections of his people. And therefore being now too wiſe to diſdain perils any longer, and willing to give ſome contentment in that kind, (at leaſt in ceremony) he reſolved at laſt to proceed to the coronation of his queen. And therefore at his coming to *London*, where he enter'd in ſtate, and in a kind of triumph, and celebrated his victory with two days of devotion, (for the firſt day he repaired to *Paul*'s, and had the hymn of *Te Deum* ſung, and the morrow after he went in proceſſion, and heard the ſermon at the croſs) the queen was with great ſolemnity crowned at *Weſtminſter*,

*minſter*, the five and twentieth of *November*, in the third year of his reign, which was about two years after the marriage; like an old chriſtening, that had ſtayed long for godfathers. Which ſtrange and unuſual diſtance of time, made it ſubject to every man's note, that it was an act againſt his ſtomach, and put upon him by neceſſity and reaſon of ſtate. Soon after, to ſhew that it was now fair weather again, and that the impriſonment of *Thomas* marquis of *Dorſet*, was rather upon ſuſpicion of the time, than of the man, he, the ſaid marquis, was ſet at liberty, without examination, or other circumſtance. At that time alſo the king ſent an ambaſſador unto pope *Innocent*, ſignifying unto him this his marriage; and that now (like another *Æneas*) he had paſſed through the floods of his former troubles and travels, and was arrived unto a ſafe haven: and thanking his holineſs that he had honoured the celebration of his marriage with the preſence of his ambaſſador; and offering both his perſon, and the forces of his kingdom, upon all occaſions, to do him ſervice.

The ambaſſador making his oration to the pope, in the preſence of the cardinals, did ſo magnify the king and queen, as was enough to glut the hearers. But then he did again ſo extol and deify the pope, as made all that he had ſaid in praiſe of his maſter and miſtreſs ſeem temperate and paſſable. But he was very honourably entertained, and extremely much made on by the pope: Who knowing himſelf to be lazy and unprofitable to the Chriſtian world, was wonderfully glad to hear that there were ſuch echoes of him ſounding in remote parts. He obtained alſo of the pope a very juſt and honourable bull, qualifying the privileges of ſanctuary (wherewith the king had been extremely galled) in three points.

The firſt, that if any ſanctuary man did by night, or otherwiſe, get out of ſanctuary privily, and commit miſchief and treſpaſs, and then come in again, he ſhould loſe the benefit of ſanctuary for ever after. The ſecond, that howſoever the perſon of the ſanctuary man was protected from his creditors, yet his goods out of ſanctuary ſhould not. The third, that if any took ſanctuary for caſe of treaſon, the king might appoint him keepers to look to him in ſanctuary.

The king alſo for the better ſecuring of his eſtate againſt mutinous and malecontented ſubjects, (whereof he ſaw the realm was full) who might have their refuge into *Scotland*, which was not under key as the ports were; for that cauſe rather than for any doubt of hoſtility from thoſe parts, before his coming to *London* (when he was at *Newcaſtle*) had ſent a ſolemn embaſſage unto *James* the third king of *Scotland*, to treat and conclude a peace with him. The embaſſadors were, *Richard Fox* biſhop of *Exeter*, and ſir *Richard Edgcomb* comptroller of the king's houſe, who were honourably received and entertained there. But the king of *Scotland* labouring of the ſame diſeaſe that king *Henry* did (though more mortal, as afterwards appeared) that is, diſcontented ſubjects, apt to riſe and raiſe tumult, although in his own affection he did much deſire to make a peace with the king; yet finding his nobles averſe, and not daring to diſpleaſe them, concluded only a truce for ſeven years; giving nevertheleſs promiſe in private, that it ſhould be renewed from time to time during the two kings lives.

Hitherto the king had been exerciſed in ſettling his affairs at home. But about this time brake forth an occaſion that drew him to look abroad, and to hearken to foreign buſineſs. *Charles* the eighth the *French* king, by the virtue and good fortune of his two immediate predeceſſors, *Charles* the ſeventh his grandfather, and *Lewis* the eleventh his father, received the kingdom

kingdom of *France* in more flouriſhing and ſpread eſtate, than it had been of many years before; being redintegrate in thoſe principal members, which anciently had been portions of the crown of *France*, and were afterward diſſevered, ſo as they remained only in homage, and not in ſovereignty, (being governed by abſolute princes of their own,) *Anjou*, *Normandy*, *Provence*, and *Burgundy*. There remained only *Britain* to be reunited, and ſo the monarchy of *France* to be reduced to the ancient terms and bounds.

King *Charles* was not a little inflamed with an ambition to repurchaſe and reannex that duchy: Which his ambition was a wiſe and well weighed ambition; not like unto the ambitions of his ſucceeding enterprizes of *Italy*. For at that time being newly come to the crown, he was ſomewhat guided by his father's counſels, (counſels, not counſellors) for his father was his own counſel, and had few able men about him. And that king (he knew well) had ever diſtaſted the deſigns of *Italy*, and in particular had an eye upon *Britain*. There were many circumſtances that did feed the ambition of *Charles*, with pregnant and apparent hopes of ſucceſs. The duke of *Britain* old, and entred into a lethargy, and ſerved with mercenary counſellors, father of two only daughters, the one ſickly and not like to continue. King *Charles* himſelf in the flower of his age, and the ſubjects of *France* at that time well trained for war, both for leaders and ſoldiers; men of ſervice being not yet worn out, ſince the wars of *Lewis* againſt *Burgundy*. He found himſelf alſo in peace with all his neighbour princes. As for thoſe that might oppoſe to his enterprize, *Maximilian* king of the *Romans*, his rival in the ſame deſires, (as well for the duchy, as the daughter) feeble in means; and king *Henry* of *England* as well ſomewhat obnoxious to him for his favours and benefits, as buſied in his particular troubles at home. There was alſo a fair and ſpecious occaſion offered him to hide his ambition, and to juſtify his warring upon *Britain*; for that the duke had received and ſuccoured *Lewis* duke of *Orleans*, and other of the *French* nobility, which had taken arms againſt their king. Wherefore king *Charles* being reſolved upon that war, knew well he could not receive any oppoſition ſo potent, as if king *Henry* ſhould either upon policy of ſtate, in preventing the growing greatneſs of *France*; or upon gratitude unto the duke of *Britain*, for his former favours in the time of his diſtreſs, eſpouſe that quarrel, and declare himſelf in aid of the duke. Therefore he no ſooner heard that king *Henry* was ſettled by his victory, but forthwith he ſent embaſſadors unto him to pray his aſſiſtance, or at the leaſt that he would ſtand neutral. Which embaſſadors found the king at *Leiceſter*, and delivered their embaſſage to this effect: they firſt imparted unto the king the ſucceſs that their maſter had had a little before againſt *Maximilian*, in recovery of certain towns from him: which was done in a kind of privacy, and inwardneſs towards the king; as if the *French* king did not eſteem him for an outward or formal confederate, but as one that had part in his affections and fortunes, and with whom he took pleaſure to communicate his buſineſs. After this complement, and ſome gratulation for the king's victory, they fell to their errand; declaring to the king, that their maſter was enforced to enter into a juſt and neceſſary war with the duke of *Britain*, for that he had received and ſuccoured thoſe that were traitors, and declared enemies unto his perſon and ſtate. That they were no mean, diſtreſſed, and calamitous perſons that fled to him for refuge, but of ſo great quality, as it was apparent that they came not thither to protect their own fortune, but to infeſt and invade his; the head of them being the duke of *Orleans*, the firſt prince

of the blood, and the ſecond perſon of *France*. That therefore rightly to underſtand it, it was rather on their maſter's part a defenſive war, than an offenſive; as that that could not be omitted or forborn, if he tendred the conſervation of his own eſtate; and that it was not the firſt blow that made the war invaſive, (for that no wiſe prince would ſtay for) but the firſt provocation, or at leaſt the firſt preparation. Nay, that this war was rather a ſuppreſſion of rebels, than a war with a juſt enemy; where the caſe is, that his ſubjects, traitors, are received by the duke of *Britain* his homager. That king *Henry* knew well what went upon it in example, if neighbour princes ſhould patronize and comfort rebels, againſt the law of nations and of leagues. Nevertheleſs that their maſter was not ignorant, that the king had been beholden to the duke of *Britain* in his adverſity; as on the other ſide, they knew he would not forget alſo the readineſs of their king, in aiding him when the duke of *Britain*, or his mercenary counſellors, failed him, and would have betrayed him; and that there was a great difference between the courteſies received from their maſter, and the duke of *Britain*: for that the duke's might have ends of utility and bargain; whereas their maſter's could not have proceeded but out of entire affection. For that if it had been meaſured by a politick line, it had been better for his affairs, that a tyrant ſhould have reigned in *England*, troubled and hated, than ſuch a prince, whoſe virtues could not fail to make him great and potent, whenſoever he was come to be maſter of his affairs. But howſoever it ſtood for the point of obligation, which the king might owe to the duke of *Britain*, yet their maſter was well aſſured, it would not divert king *Henry* of *England* from doing that that was juſt, nor ever embark him in ſo ill-grounded a quarrel. Therefore, ſince this war, which their maſter was now to make, was but to deliver himſelf from imminent dangers, their king hoped the king would ſhew the like affection to the conſervation of their maſter's eſtate, as their maſter had (when time was) ſhewed to the king's acquiſition of his kingdom. At the leaſt, that according to the inclination which the king had ever profeſſed of peace, he would look on, and ſtand neutral; for that their maſter could not with reaſon preſs him to undertake part in the war, being ſo newly ſettled, and recovered from inteſtine ſeditions. But touching the myſtery of reannexing of the duchy of *Britain* to the crown of *France*, either by war or by marriage with the daughter of *Britain*; the embaſſadors bare aloof from it as from a rock, knowing that it made moſt againſt them. And therefore by all means declined any mention thereof, but contrariwiſe interlaced in their conference with the king, the aſſured purpoſe of their maſter to match with the daughter of *Maximilian*; and entertained the king alſo with ſome wandring diſcourſes of their king's purpoſe, to recover by arms his right to the kingdom of *Naples*, by an expedition in perſon; all to remove the king from all jealouſy of any deſign in theſe hither parts upon *Britain*, otherwiſe than for quenching of the fire, which he feared might be kindled in his own eſtate.

The king, after advice taken with his council, made anſwer to the embaſſadors: and firſt returned their complement, ſhewing he was right glad of the *French* king's reception of thoſe towns from *Maximilian*. Then he familiarly related ſome particular paſſages of his own adventures and victory paſſed. As to the buſineſs of *Britain*, the king anſwered in few words; that the *French* king and the duke of *Britain*, were the two perſons to whom he was moſt obliged of all men; and that he ſhould think himſelf very unhappy, if things ſhould go ſo between them, as he ſhould not be able to acquit

acquit himſelf in gratitude towards them both; and that there was no means for him as a Chriſtian king, and a common friend to them, to ſatisfy all obligations both to God and man, but to offer himſelf for a mediator of an accord and peace between them; by which courſe he doubted not but their king's eſtate and honour both, would be preſerved with more ſafety and leſs envy than by a war; and that he would ſpare no coſt or pains, no if it were to go on pilgrimage, for ſo good an effect: and concluded, that in this great affair, which he took ſo much to heart, he would expreſs himſelf more fully by an embaſſage, which he would ſpeedily diſpatch unto the *French* king for that purpoſe. And in this ſort the *French* embaſſadors were diſmiſſed: the king avoiding to underſtand any thing touching the reannexing of *Britain*, as the embaſſadors had avoided to mention it; ſave that he gave a little touch of it in the word envy. And ſo it was, that the king was neither ſo ſhallow, nor ſo ill advertiſed, as not to perceive the intention of the *French* for the inveſting himſelf of *Britain*. But firſt, he was utterly unwilling (howſoever he gave out) to enter into war with *France*. A fame of a war he liked well, but not an atchievement; for the one he thought would make him richer, and the other poorer; and he was poſſeſſed with many ſecret fears touching his own people, which he was therefore loth to arm, and put weapons into their hands. Yet notwithſtanding (as a prudent and couragious prince) he was not ſo averſe from a war, but that he was reſolved to chuſe it, rather than to have *Britain* carried by *France*, being ſo great and opulent a duchy, and ſituate ſo opportunely to annoy *England*, either for coaſt or trade. But the king's hopes were, that partly by negligence, commonly imputed to the *French* (eſpecially in the court of a young king) and partly by the native power of *Britain* it ſelf, which was not ſmall; but chiefly in reſpect of the great party that the duke of *Orleans* had in the kingdom of *France*, and thereby means to ſtir up civil troubles, to divert the *French* king from the enterprize of *Britain*. And laſtly, in regard of the power of *Maximilian*, who was corrival to the *French* king in that purſuit, the enterprize would either bow to a peace, or break in it ſelf. In all which the king meaſured and valued things amiſs, as afterwards appeared. He ſent therefore forthwith to the *French* king, *Chriſtopher Urſwick*, his chaplain, a perſon by him much truſted and employed: chuſing him the rather, becauſe he was a churchman, as beſt ſorting with an embaſſy of pacification: and giving him alſo a commiſſion, that if the *French* king conſented to treat, he would thence repair to the duke of *Britain*, and ripen the treaty on both parts. *Urſwick* made declaration to the *French* king, much to the purpoſe of the king's anſwer to the *French* embaſſadors here, inſtilling alſo tenderly ſome overture of receiving to grace the duke of *Orleans*, and ſome taſte of conditions of accord. But the *French* king on the other ſide proceeded not ſincerely, but with a great deal of art and diſſimulation, in this treaty; having for his end to gain time, and ſo put off the *Engliſh* ſuccours under hope of peace, till he had got good footing in *Britain* by force of arms. Wherefore he anſwered the embaſſador, that he would put himſelf into the king's hands, and make him arbiter of the peace; and willingly conſented, that the embaſſador ſhould ſtraightways paſs into *Britain*, to ſignify this his conſent, and to know the duke's mind likewiſe; well foreſeeing, that the duke of *Orleans*, by whom the duke of *Britain* was wholly led, taking himſelf to be upon terms irreconcileable with him, would admit of no treaty of peace. Whereby he ſhould in one, both generally abroad veil over his ambition, and win the

reputation of juſt and moderate proceedings; and ſhould withal endear himſelf in the affections of the king of *England*, as one that had committed all to his will: nay, and (which was yet more fine) make faith in him, that although he went on with the war, yet it ſhould be but with his ſword in his hand, to bend the ſtiffneſs of the other party to accept of peace; and ſo the king ſhould take no umbrage of his arming and proſecution; but the treaty to be kept on foot to the very laſt inſtant, till he were maſter of the field.

WHICH grounds being by the *French* king wiſely laid, all things fell out as he expected. For when the *Engliſh* embaſſador came to the court of *Britain*, the duke was then ſcarcely perfect in his memory, and all things were directed by the duke of *Orleans*, who gave audience to the chaplain *Urſwick*, and upon his embaſſage delivered, made anſwer in ſomewhat high terms: that the duke of *Britain* having been an hoſt, and a kind of parent or foſter-father to the king, in his tenderneſs of age, and weakneſs of fortune, did look for at this time from king *Henry*, (the renowned king of *England*) rather brave troops for his ſuccours, than a vain treaty of peace. And if the king could forget the good offices of the duke done unto him aforetime; yet he knew well, he would in his wiſdom conſider of the future, how much it imported his own ſafety and reputation, both in foreign parts, and with his own people, not to ſuffer *Britain* (the old confederates of *England*) to be ſwallowed up by *France*, and ſo many good ports and ſtrong towns upon the coaſt, be in the command of ſo potent a neighbour king, and ſo ancient an enemy. And therefore humbly deſired the king to think of this buſineſs as his own; and therewith broke off, and denied any farther conference for treaty.

*Urſwick* returned firſt to the *French* king, and related to him what had paſſed. Who finding things to ſort to his deſire, took hold of them, and ſaid; that the embaſſador might perceive now, that which he for his part partly imagined before. That conſidering in what hands the duke of *Britain* was, there would be no peace, but by a mix'd treaty of force and perſuaſion: and therefore he would go on with the one, and deſired the king not to deſiſt from the other. But for his own part, he did faithfully promiſe to be ſtill in the king's power, to rule him in the matter of peace. This was accordingly repreſented unto the king by *Urſwick* at his return, and in ſuch a faſhion, as if the treaty was in no ſort deſperate, but rather ſtayed for a better hour, till the hammer had wrought, and beat the party of *Britain* more pliant. Whereupon there paſſed continually packets and diſpatches between the two kings, from the one out of deſire, and from the other out of diſſimulation, about the negotiation of peace. The *French* king mean while invaded *Britain* with great forces, and diſtreſſed the city of *Nantz* with a ſtraight ſiege, and (as one, who though he had no great judgment, yet had that, that he could diſſemble home) the more he did urge the proſecution of the war, the more he did at the ſame time, urge the ſolicitation of the peace. Inſomuch as during the ſiege of *Nantz*, after many letters and particular meſſages, the better to maintain his diſſimulation, and to refreſh the treaty; he ſent *Bernard D'Aubigney* (a perſon of good quality) to the king, earneſtly to deſire him, to make an end of the buſineſs howſoever.

THE king was no leſs ready to revive and quicken the treaty; and thereupon ſent three commiſſioners, the abbot of *Abingdon*, ſir *Richard Tunſtal*,

*ſtal*, and chaplain *Urſwick* formerly employed, to do their utmoſt endeavours to manage the treaty roundly and ſtrongly.

About this time the lord *Woodvile* (uncle to the queen) a valiant gentleman, and deſirous of honour, ſued to the king that he might raiſe ſome power of voluntiers under-hand, and without licence or paſſport, (wherein the king might any ways appear) go to the aid of the duke of *Britain*. The king denied his requeſt, (or at leaſt ſeemed ſo to do) and laid ſtrait commandment upon him, that he ſhould not ſtir, for that the king thought his honour would ſuffer therein, during a treaty, to better a party. Nevertheleſs this lord (either being unruly, or out of conceit that the king would not inwardly diſlike that, which he would not openly avow) ſailed ſecretly over into the iſle of *Wight*, whereof he was governour, and levied a fair troop of four hundred men, and with them paſſed over into *Britain*, and joined himſelf with the duke's forces. The news whereof, when it came to the *French* court, put divers young bloods into ſuch a fury, as the *Engliſh* embaſſadors were not without peril to be outraged. But the *French* king, both to preſerve the privilege of embaſſadors, and being conſcious to himſelf, that in the buſineſs of peace, he himſelf was the greater diſſembler of the two, forbad all injuries of fact or word, againſt their perſons or followers. And preſently came an agent from the king, to purge himſelf touching the lord *Woodvile*'s going over; uſing for a principal argument, to demonſtrate that it was without his privity, for that the troops were ſo ſmall, as neither had the face of a ſuccour by authority, nor could much advance the *Britain* affairs. To which meſſage, although the *French* king gave no full credit, yet he made fair weather with the king, and ſeemed ſatisfied. Soon after the *Engliſh* embaſſadors returned, having two of them been likewiſe with the duke of *Britain*, and found things in no other terms than they were before. Upon their return, they informed the king of the ſtate of the affairs, and how far the *French* king was from any true meaning of peace; and therefore he was now to adviſe of ſome other courſe: Neither was the king himſelf led all this while with credulity merely, as was generally ſuppoſed: but his error was not ſo much facility of belief, as an ill meaſuring of the forces of the other party.

For (as was partly touched before) the king had caſt the buſineſs thus with himſelf. He took it for granted in his own judgment, that the war of *Britain*, in reſpect of the ſtrength of the towns, and of the party, could not ſpeedily come to a period. For he conceived, that the councils of a war, that was undertaken by the *French* king, then childleſs, againſt an heir apparent of *France*, would be very faint and ſlow. And beſides, that it was not poſſible, but that the ſtate of *France* ſhould be embroiled with ſome troubles and alterations in favour of the duke of *Orleans*. He conceived likewiſe, that *Maximilian*, king of the *Romans*, was a prince war-like and potent; who (he made account) would give ſuccours to the *Britains* roundly. So then judging it would be a work of time, he laid his plot, how he might beſt make uſe of that time, for his own affairs. Wherein firſt he thought to make his vantage upon his parliament; knowing that they being affectionate unto the quarrel of *Britain*, would give treaſure largely: Which treaſure, as a noiſe of war might draw forth, ſo a peace ſucceeding might coffer up. And becauſe he knew his people were hot upon the buſineſs, he choſe rather to ſeem to be deceived, and lulled aſleep by the *French*, than to be backward in himſelf; conſidering his ſubjects were not ſo fully capable of the reaſons of ſtate, which made him hold back. Where-

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fore to all theſe purpoſes he ſaw no other expedient, than to ſet and keep on foot a continual treaty of peace, laying it down, and taking it up again, as the occurrence required. Beſides, he had in conſideration the point of honour, in bearing the bleſſed perſon of a pacificator. He thought likewiſe to make uſe of the envy that the *French* king met with, by occaſion of this war of *Britain*, in ſtrengthening himſelf with new alliances; as namely, that of *Ferdinando* of *Spain*, with whom he had ever a conſent even in nature and cuſtoms; and likewiſe with *Maximilian*, who was particularly intereſted. So that in ſubſtance he promiſed himſelf money, honour, friends, and peace in the end. But thoſe things were too fine to be fortunate, and ſucceed in all parts; for that great affairs are commonly too rough and ſtubborn to be wrought upon by the finer edges, or points of wit. The king was likewiſe deceived in his two main grounds. For although he had reaſon to conceive that the council of *France* would be wary to put the king into a war againſt the heir apparent of *France*; yet he did not conſider that *Charles* was not guided by any of the principal of the blood or nobility, but by mean men, who would make it their maſter-piece of credit and favour, to give venturous councils, which no great or wiſe man durſt, or would. And for *Maximilian*, he was thought then a greater matter than he was; his unſtable and neceſſitous courſes being not then known.

After conſultation with the embaſſadors, who brought him no other news than he expected before, (though he would not ſeem to know it till then,) he preſently ſummoned his parliament, and in open parliament propounded the cauſe of *Britain* to both houſes, by his chancellor *Morton* archbiſhop of *Canterbury*, who ſpoke to this effect.

My lords and maſters, the king's grace, our ſovereign lord, hath commanded me to declare unto you the cauſes that have moved him at this time to ſummon this his parliament; which I ſhall do in few words, craving pardon of his grace, and you all, if I perform it not as I would.

His grace doth firſt of all let you know, that he retaineth in thankful memory the love and loyalty ſhewed to him by you, at your laſt meeting, in eſtabliſhment of his royalty; freeing and diſcharging of his partakers, and confiſcation of his traitors and rebels; more than which could not come from ſubjects to their ſovereign, in one action. This he taketh ſo well at your hands, as he hath made it a reſolution to himſelf, to communicate with ſo loving and well approved ſubjects, in all affairs that are of publick nature, at home and abroad.

Two therefore are the cauſes of your preſent aſſembling: the one, a foreign buſineſs; the other, matter of government at home.

The *French* king (as no doubt ye have heard) maketh at this preſent hot war upon the duke of *Britain*. His army is now before *Nantz*, and holdeth it ſtraitly beſieged, being the principal city (if not in ceremony and preheminence, yet in ſtrength and wealth) of that duchy. Ye may gueſs at his hopes, by his attempting of the hardeſt part of the war firſt. The cauſe of this war he knoweth beſt. He allegeth the entertaining and ſuccouring of the duke of *Orleans*, and ſome other *French* lords, whom the king taketh for his enemies. Others divine of other matters. Both parts have, by their embaſſadors, divers times prayed the king's aids: the *French* king's aids, or neutrality; the *Britains* aids ſimply; for ſo their caſe requireth. The king, as a Chriſtian prince, and bleſſed ſon of the holy church, hath offered himſelf as a mediator, to treat of peace between them. The

*French*

*French* king yielded to treat, but will not ſtay the proſecution of the war. The *Britains*, that deſire peace moſt, harken to it leaſt; not upon confidence or ſtiffneſs, but upon diſtruſt of true meaning, ſeeing the war goes on. So as the king, after as much pains and care to effect a peace, as ever he took in any buſineſs, not being able to remove the proſecution on the one ſide, nor the diſtruſt on the other, cauſed by that proſecution, hath let fall the treaty; not repenting of it, but deſpairing of it now, as not likely to ſucceed. Therefore by this narrative you now underſtand the ſtate of the queſtion, whereupon the king prayeth your advice; which is no other, but whether he ſhall enter into an auxiliary and defenſive war for the *Britains* againſt *France?*

And the better to open your underſtandings in this affair, the king hath commanded me to ſay ſomewhat to you from him, of the perſons that do intervene in this buſineſs; and ſomewhat of the conſequence thereof, as it hath relation to this kingdom, and ſomewhat of the example of it in general: making nevertheleſs no concluſion or judgment of any point, until his grace hath received your faithful and politick advices.

First, for the king our ſovereign himſelf, who is the principal perſon you are to eye in this buſineſs; his grace doth profeſs, that he truly and conſtantly deſireth to reign in peace. But his grace ſaith, he will neither buy peace with diſhonour, nor take it up at intereſt of danger to enſue; but ſhall think it a good change, if it pleaſe God to change the inward troubles and ſeditions, wherewith he hath been hitherto exerciſed, into an honourable foreign war. And for the other two perſons in this action, the *French* king, and the duke of *Britain*, his grace doth declare unto you, that they be the men unto whom he is of all other friends and allies moſt bounden: the one having held over him his hand of protection from the tyrant; the other having reach'd forth unto him his hand of help, for the recovery of his kingdom. So that his affection toward them in his natural perſon, is upon equal terms. And whereas you may have heard, that his grace was enforced to fly out of *Britain* into *France*, for doubts of being betrayed; his grace would not in any ſort have that reflect upon the duke of *Britain*, in defacement of his former benefits; for that he is throughly informed, that it was but the practice of ſome corrupt Perſons about him, during the time of his ſickneſs, altogether without his conſent or privity.

But howſoever theſe things do intereſt his grace in his particular, yet he knoweth well, that the higher bond that tyeth him to procure by all means the ſafety and welfare of his loving ſubjects, doth diſintereſt him of theſe obligations of gratitude, otherwiſe than thus; that if his grace be forced to make a war, he do it without paſſion or ambition.

For the conſequence of this action towards this kingdom, it is much as the *French* king's intention is. For if it be no more, but to range his ſubjects to reaſon, who bear themſelves ſtout upon the ſtrength of the duke of *Britain*, it is nothing to us. But if it be in the *French* king's purpoſe, or if it ſhould not be in his purpoſe, yet if it ſhall follow all one, as if it were ſought, that the *French* king ſhall make a province of *Britain*, and join it to the crown of *France:* then it is worthy the conſideration, how this may import *England*, as well in the increaſement of the greatneſs of *France*, by the addition of ſuch a countrey, that ſtretcheth his boughs unto our ſeas, as in depriving this nation, and leaving it naked of ſo firm and aſſured confederates, as the *Britains* have always been. For then it will come to paſs, that whereas not long ſince this realm was mighty upon the continent, firſt

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in territory, and after in alliance, in reſpect of *Burgundy* and *Britain*, which were confederates indeed, but dependent confederates; now the one being already caſt, partly into the greatneſs of *France*, and partly into that of *Auſtria*, the other is like wholly to be caſt into the greatneſs of *France*; and this iſland ſhall remain confined in effect within the ſalt waters, and girt about with the coaſt countries of two mighty monarchs.

For the example, it reſteth likewiſe upon the ſame queſtion, upon the *French* king's intent. For if *Britain* be carried and ſwallowed up by *France*, as the world abroad (apt to impute and conſtrue the actions of princes to ambition) conceive it will; then it is an example very dangerous and univerſal, that the leſſer neighbour eſtate ſhould be devoured of the greater. For this may be the caſe of *Scotland* towards *England*; of *Portugal* towards *Spain*; of the ſmaller eſtates of *Italy* towards the greater; and ſo of *Germany*; or as if ſome of you of the commons, might not live and dwell ſafely beſides ſome of theſe great lords. And the bringing in of this example will be chiefly laid to the king's charge, as to him that was moſt intereſted, and moſt able to forbid it. But then on the other ſide, there is ſo fair a pretext on the *French* king's part, (and yet pretext is never wanting to power,) in regard the danger imminent to his own eſtate is ſuch, as may make this enterprize ſeem rather a work of neceſſity than of ambition, as doth in reaſon correct the danger of the example. For that the example of that which is done in a man's own defence, cannot be dangerous; becauſe it is in another's power to avoid it. But in all this buſineſs, the king remits himſelf to your grave and mature advice, whereupon he purpoſeth to rely.

This was the effect of the lord chancellor's ſpeech touching the cauſe of *Britain*; for the king had commanded him to carry it ſo, as to effect the parliament towards the buſineſs; but without engaging the king in any expreſs declaration.

The chancellor went on:

For that which may concern the government at home, the king hath commanded me to ſay unto you; that he thinketh there was never any king (for the ſmall time that he hath reigned) had greater and juſter cauſe of the two contrary paſſions of joy and ſorrow, than his grace hath. Joy, in reſpect of the rare and viſible favours of Almighty God, in girding the imperial ſword upon his ſide, and aſſiſting the ſame his ſword againſt all his enemies; and likewiſe in bleſſing him with ſo many good and loving ſervants and ſubjects, which have never failed to give him faithful council, ready obedience, and courageous defence. Sorrow, for that it hath not pleaſed God to ſuffer him to ſheath his ſword, (as he greatly deſired, otherwiſe than for adminiſtration of juſtice) but that he hath been forced to draw it ſo oft, to cut off traitorous, and diſloyal ſubjects, whom (it ſeems) God hath left (a few amongſt many good) as the *Canaanites* amongſt the people of *Iſrael*, to be thorns in their ſides, to tempt and try them; though the end hath been always, (God's name be bleſſed therefore) that the deſtruction hath fallen upon their own heads.

Wherefore his grace ſaith; that he ſeeth that it is not the blood ſpilt in the field that will ſave the blood in the city; nor the marſhal's ſword that will ſet this kingdom in perfect peace: but that the true way is, to ſtop the ſeeds of ſedition and rebellion in their beginnings; and for that purpoſe

purpoſe to deviſe, confirm and quicken good and wholeſome laws againſt riots, and unlawful aſſemblies of people, and all combinations and confederacies of them, by liveries, tokens, and other badges of factious dependence; that the peace of the land may by theſe ordinances, as by bars of iron, be ſoundly bound in and ſtrengthened, and all force both in court, countrey, and private houſes, be ſuppreſt. The care hereof, which ſo much concerneth your ſelves, and which the nature of the times doth inſtantly call for, his grace commends to your wiſdoms.

And becauſe it is the king's deſire, that this peace, wherein he hopeth to govern and maintain you, do not bear only unto you leaves, for you to ſit under the ſhade of them in ſafety; but alſo ſhould bear you fruit of riches, wealth and plenty: Therefore his grace prays you to take into conſideration matter of trade, as alſo the manufactures of the kingdom, and to repreſs the baſtard and barren employment of moneys to uſury and unlawful exchanges; that they may be (as their natural uſe is) turned upon commerce, and lawful and royal trading. And likewiſe, that our people be ſet on work in arts and handicrafts; that the realm may ſubſiſt more of it ſelf; that idleneſs be avoided, and the draining out of our treaſure for foreign manufactures, ſtopped. But you are not to reſt here only, but to provide farther, that whatſoever merchandize ſhall be brought in from beyond the ſeas, may be employed upon the commodities of this land; whereby the kingdom's ſtock of treaſure may be ſure to be kept from being diminiſhed, by any over-trading of the foreigner.

And laſtly, becauſe the king is well aſſured, that you would not have him poor, that wiſhes you rich; he doubteth not but that you will have care, as well to maintain his revenues of cuſtoms, and all other natures, as alſo to ſupply him with your loving aids, if the caſe ſhall ſo require. The rather, for that you know the king is a good huſband, and but a ſteward in effect for the publick; and that what comes from you, is but as moiſture drawn from the earth, which gathers into a cloud, and falls back upon the earth again. And you know well, how the kingdoms about you grow more and more in greatneſs, and the times are ſtirring; and therefore not fit to find the king with an empty purſe. More I have not to ſay to you; and wiſh, that what hath been ſaid, had been better expreſs'd: but that your wiſdoms and good affections will ſupply. God bleſs your doings.

It was no hard matter to diſpoſe and affect the parliament in this buſineſs; as well in reſpect of the emulation between the nations, and the envy at the late growth of the *French* monarchy; as in regard of the danger to ſuffer the *French* to make their approaches upon *England*, by obtaining ſo goodly a maritime province, full of ſea-towns, and havens, that might do miſchief to the *Engliſh*, either by invaſion, or by interruption of traffick. The parliament was alſo moved with the point of oppreſſion; for although the *French* ſeemed to ſpeak reaſon, yet arguments are ever with multitudes too weak for ſuſpicions. Wherefore they did adviſe the king, roundly to embrace the *Britains* quarrel, and to ſend them ſpeedy aids; and with much alacrity and forwardneſs granted to the king a great rate of ſubſidy, in contemplation of theſe aids. But the king, both to keep a decency towards the *French* king, to whom he profeſt himſelf to be obliged, and indeed deſirous rather to ſhew war, than to make it; ſent new ſolemn embaſſadors to intimate unto him the decree of his eſtates, and to iterate his motion, that the *French* would deſiſt from hoſtility; or if war muſt follow, to deſire

him to take it in good part, if at the motion of his people, who were ſenſible of the cauſe of the *Britains* as their ancient friends and confederates, he did ſend them ſuccours; with proteſtation nevertheleſs, that to ſave all treaties and laws of friendſhip, he had limited his forces to proceed in aid of the *Britains*, but in no wiſe to war upon the *French*, otherwiſe than as they maintained the poſſeſſion of *Britain*. But before this formal embaſſage arrived, the party of the duke had received a great blow, and grew to manifeſt declination. For near the town of *St. Alban* in *Britain*, a battel had been given, where the *Britains* were overthrown, and the duke of *Orleans*, and the prince of *Orange* taken priſoners, there being ſlain on the *Britains* part ſix thouſand men, and amongſt them the lord *Woodvile*, and almoſt all his ſoldiers, valiantly fighting. And of the *French* part, one thouſand two hundred, with their leader *James Galeot* a great commander.

When the news of this battel came over into *England*, it was time for the king (who now had no ſubterfuge to continue farther treaty, and ſaw before his eyes that *Britain* went ſo ſpeedily for loſt, contrary to his hopes; knowing alſo that with his people and foreigners both, he ſuſtained no ſmall envy and diſreputation for his former delays) to diſpatch with all poſſible ſpeed his ſuccours into *Britain*; which he did under the conduct of *Robert* lord *Brook*, to the number of eight thouſand choice men, and well armed; who having a fair wind, in few hours landed in *Britain*, and joined themſelves forthwith to thoſe *Britain* forces that remained after the defeat, and marched ſtraight on to find the enemy, and encamped faſt by them. The *French* wiſely husbanding the poſſeſſion of a victory, and well acquainted with the courage of the *Engliſh*, eſpecially when they are freſh, kept themſelves within their trenches, being ſtrongly lodged, and reſolved not to give battel. But mean while, to harraſs and weary the *Engliſh*, they did upon all advantages ſet upon them with their light horſe; wherein nevertheleſs they received commonly loſs, eſpecially by means of the *Engliſh* archers.

But upon theſe atchievements *Francis* duke of *Britain* deceaſed; an accident that the king might eaſily have foreſeen, and ought to have reckoned upon and provided for, but that the point of reputation, when news firſt came of the battle loſt (that ſomewhat muſt be done) did overbear the reaſon of war.

After the duke's deceaſe, the principal perſons of *Britain*, partly bought, partly through faction, put all things into confuſion; ſo as the *Engliſh* not finding head or body with whom to join their forces, and being in jealouſy of friends, as well as in danger of enemies, and the winter begun, returned home five months after their landing. So the battel of *St. Alban*, the death of the duke, and the retire of the *Engliſh* ſuccours, were (after ſome time) the cauſes of the loſs of that duchy; which action ſome accounted as a blemiſh of the king's judgment, but moſt but as the misfortune of his times.

But howſoever the temporary fruit of the parliament, in their aid and advice given for *Britain*, took not, nor proſpered not; yet the laſting fruit of parliament, which is good and wholeſome laws, did proſper, and doth yet continue to this day. For according to the lord chancellor's admonition, there were that parliament divers excellent laws ordained, concerning the points which the king recommended.

First, the authority of the ſtar-chamber, which before ſubſiſted by the ancient common laws of the realm, was confirmed in certain caſes by act

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of parliament. This court is one of the ſageſt and nobleſt inſtitutions of this kingdom. For in the diſtribution of courts of ordinary juſtice, (beſides the high court of parliament) in which diſtribution the king's-bench holdeth the pleas of the crown, the common-pleas pleas civil, the exchequer pleas concerning the king's revenue, and the chancery the Pretorian power for mitigating the rigour of law, in caſe of extremity, by the conſcience of a good man; there was nevertheleſs always reſerved a high and prehemineſt power to the king's counſel, in cauſes that might in example or conſequence concern the ſtate of the common-wealth; which if they were criminal, the council uſed to ſit in the chamber called the ſtar-chamber; if civil, in the white-chamber, or white-hall. And as the chancery had the Pretorian power for equity; ſo the ſtar-chamber had the Cenſorian power for offences under the degree of capital. This court of ſtar-chamber is compounded of good elements, for it conſiſteth of four kinds of perſons, counſellors, peers, prelates, and chief judges. It diſcerneth alſo principally of four kinds of cauſes, forces, frauds, crimes various of ſtellionate, and the inchoations or middle acts towards crimes capital or heinous, not actually committed or perpetrated. But that which was principally aimed at by this act was force, and the two chief ſupports of force, combination of multitudes, and maintenance or headſhip of great perſons.

From the general peace of the countrey, the king's care went on to the peace of the king's houſe, and the ſecurity of his great officers and counſellors. But this law was ſomewhat of a ſtrange compoſition and temper. That if any of the king's ſervants under the degree of a lord, do conſpire the death of any of the king's council, or lord of the realm, it is made capital. This law was thought to be procured by the lord chancellor, who being a ſtern and haughty man, and finding he had ſome mortal enemies in court, provided for his own ſafety; drowning the envy of it in a general law, by communicating the privilege with all other counſellors and peers, and yet not daring to extend it farther than to the king's ſervants in check-roll, leſt it ſhould have been too harſh to the gentlemen, and other commons of the kingdom; who might have thought their ancient liberty, and the clemency of the laws of *England* invaded, if the will in any caſe of felony ſhould be made the deed. And yet the reaſon which the act yieldeth, (that is to ſay, that he that conſpireth the death of counſellors, may be thought indirectly, and by a mean, to conſpire the death of the king himſelf) is indifferent to all ſubjects, as well as to ſervants in court. But it ſeemeth this ſufficed to ſerve the lord chancellor's turn at this time. But yet he lived to need a general law, for that he grew afterwards as odious to the countrey, as he was then to the court.

From the peace of the king's houſe, the king's care extended to the peace of private houſes and families. For there was an excellent moral law moulded thus; the taking and carrying away women forcibly, and againſt their will, (except female-wards and bond-women) was made capital. The parliament wiſely and juſtly conceiving, that the obtaining of women by force into poſſeſſion, (howſoever afterwards aſſent might follow by allurements) was but a rape drawn forth in length, becauſe the firſt force drew on all the reſt.

There was made alſo another law for peace in general, and repreſſing of murders and manſlaughters, and was in amendment of the common laws of the realm; being this: that whereas by the common law the king's ſuit in caſe of homicide, did expect the year and the day, allowed to the

party's ſuit by way of appeal; and that it was found by experience, that the party was many times compounded with, and many times wearied with the ſuit, ſo that in the end ſuch ſuit was let fall, and by that time the matter was in a manner forgotten, and thereby proſecution at the king's ſuit by indictment (which is ever beſt, *flagrante crimine)* neglected; it was ordained, that the ſuit by indictment might be taken as well at any time within the year and the day, as after; not prejudicing nevertheleſs the party's ſuit.

THE king began alſo then, as well in wiſdom as in juſtice, to pare a little the privilege of clergy, ordaining, that clerks convict ſhould be burned in the hand; both becauſe they might taſte of ſome corporal puniſhment, and that they might carry a brand of infamy. But for this good act's ſake, the king himſelf was after branded by *Perkin*'s proclamation, for an execrable breaker of the rites of holy church.

ANOTHER law was made for the better peace of the countrey; by which law the king's officers and farmers were to forfeit their places and holds, in caſe of unlawful retainer, or partaking in riots and unlawful aſſemblies.

THESE were the laws that were made for repreſſing of force, which thoſe times did chiefly require; and were ſo prudently framed, as they are found fit for all ſucceeding times, and ſo continue to this day.

THERE were alſo made good and politick laws that parliament, againſt uſury, which is the baſtard uſe of money; and againſt unlawful chievances and exchanges, which is baſtard uſury; and alſo for the ſecurity of the king's cuſtoms; and for the employment of the procedures of foreign commodities, brought in by merchant-ſtrangers upon the native commodities of the realm; together with ſome other laws of leſs importance.

BUT howſoever the laws made in that parliament did bear good and wholeſome fruit; yet the ſubſidy granted at the ſame time, bare a fruit that proved harſh and bitter. All was inned at laſt into the king's barn, but it was after a ſtorm. For when the commiſſioners enter'd into the taxation of the ſubſidy in *Yorkſhire*, and the biſhoprick of *Dureſm*; the people upon a ſudden grew into great mutiny, and ſaid openly, that they had endured of late years a thouſand miſeries, and neither could nor would pay the ſubſidy. This (no doubt) proceeded not ſimply of any preſent neceſſity, but much by reaſon of the old humour of thoſe countries, where the memory of king *Richard* was ſo ſtrong, that it lay like lees in the bottom of mens hearts; and if the veſſel was but ſtirred, it would come up. And (no doubt) it was partly alſo by the inſtigation of ſome factious male-contents, that bare principal ſtroke amongſt them. Hereupon the commiſſioners being ſomewhat aſtoniſhed, deferred the matter unto the earl of *Northumberland*, who was the principal man of authority in thoſe parts. The earl forthwith wrote unto the court, ſignifying to the king plainly enough in what flame he found the people in thoſe countries, and praying the king's direction. The king wrote back peremptorily, that he would not have one penny abated, of that which had been granted to him by parliament; both becauſe it might encourage other countries, to pray the like releaſe or mitigation; and chiefly, becauſe he would never endure that the baſe multitude ſhould fruſtrate the authority of the parliament, wherein their votes and conſents were concluded. Upon this diſpatch from court, the earl aſſembled the principal juſtices and freeholders of the countrey; and ſpeaking to them in that imperious language, wherein the king had written to him, which needed not (ſave that an harſh buſineſs was unfortunately fallen into the hands of a

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harſh man) did not only irritate the people, but make them conceive, by the ſtoutneſs and haughtineſs of delivery of the king's errand, that himſelf was the author or principal perſuader of that council: whereupon the meaner ſort routed together, and ſuddenly aſſailing the earl in his houſe, ſlew him, and divers of his ſervants. And reſted not there, but creating for their leader ſir *John Egremond*, a factious perſon, and one that had of a long time born an ill talent towards the king; and being animated alſo by a baſe fellow, called *John a Chamber*, a very *boutefeu*, who bore much ſway amongſt the vulgar and popular, enter'd into open rebellion; and gave out in flat terms, that they would go againſt king *Henry*, and fight with him for the maintenance of their liberties.

When the king was advertiſed of this new inſurrection, (being almoſt a fever, that took him every year;) after his manner, little troubled therewith, he ſent *Thomas* earl of *Surrey* (whom he had a little before not only releaſed out of the tower, and pardoned, but alſo received to ſpecial favour) with a competent power againſt the rebels, who fought with the principal band of them, and defeated them, and took alive *John a Chamber*, their firebrand. As for ſir *John Egremond*, he fled into *Flanders* to the lady *Margaret* of *Burgundy*, whoſe palace was the ſanctuary and receptacle of all traitors againſt the king. *John a Chamber* was executed at *York* in great ſtate; for he was hanged upon a gibbet raiſed a ſtage higher in the midſt of a ſquare gallows, as a traitor paramount; and a number of his men that were his chief complices, were hanged upon the lower ſtory round about him; and the reſt were generally pardoned. Neither did the king himſelf omit his cuſtom, to be firſt or ſecond in all his war-like exploits, making good his word, which was uſual with him when he heard of rebels, that he deſired but to ſee them. For immediately after he had ſent down the earl of *Surrey*, he marched towards them himſelf in perſon. And although in his journey he heard news of the victory, yet he went on as far as *York*, to pacify and ſettle thoſe Countries: and that done, returned to *London*, leaving the earl of *Surrey* for his lieutenant in the northern parts, and ſir *Richard Tunſtal* for his principal commiſſioner, to levy the ſubſidy, whereof he did not remit a denier.

About the ſame time that the king loſt ſo good a ſervant as the earl of *Northumberland*, he loſt likewiſe a faithful friend and ally of *James* the third, king of *Scotland*, by a miſerable diſaſter. For this unfortunate prince, after a long ſmother of diſcontent, and hatred of many of his nobility and people, breaking forth at times into ſeditions and alterations of court, was at laſt diſtreſſed by them, having taken arms, and ſurprized the perſon of prince *James* his ſon, partly by force, partly by threats, that they would otherwiſe deliver up the kingdom to the king of *England*, to ſhadow their rebellion, and to be the titular and painted head of thoſe arms. Whereupon the king (finding himſelf too weak) ſought unto king *Henry*, as alſo unto the pope, and the king of *France*, to compoſe thoſe troubles between him and his ſubjects. The kings accordingly interpoſed their mediation in a round and princely manner: not only by way of requeſt and perſuaſion, but alſo by way of proteſtation and menace; declaring, that they thought it to be the common cauſe of all kings, if ſubjects ſhould be ſuffered to give laws unto their ſovereign; and that they would accordingly reſent it, and revenge it. But the Rebels that had ſhaken off the greater yoke of obedience, had likewiſe caſt away the leſſer tye of reſpect. And fury prevailing above fear, made anſwer; that there was no talking of peace, except the king would

would reſign his crown. Whereupon (treaty of accord taking no place) it came to a battel at *Bannockſbourn* by *Strivelin:* in which battel the king tranſported with wrath and juſt indignation, inconſiderately fighting and precipitating the charge, before his whole numbers came up to him, was (notwithſtanding the contrary expreſs and ſtrait commandment of the prince his ſon) ſlain in the purſuit, being fled to a mill, ſituate in the field, where the battel was fought.

As for the pope's embaſſy, which was ſent by *Adrian de Caſtello* an *Italian* legate, (and perhaps as thoſe times were, might have prevailed more) it came too late for the embaſſy, but not for the embaſſador. For paſſing through *England*, and being honourably entertained, and received of king *Henry*, (who ever applied himſelf with much reſpect to the ſee of *Rome,)* he fell into great grace with the king, and great familiarity and friendſhip with *Morton* the chancellor: inſomuch as the king taking a liking to him, and finding him to his mind, preferred him to the biſhoprick of *Hereford*, and afterwards to that of *Bath* and *Wells*, and employed him in many of his affairs of ſtate, that had relation to *Rome*. He was a man of great learning, wiſdom, and dexterity in buſineſs of ſtate; and having not long after aſcended to the degree of cardinal, paid the king large tribute of his gratitude, in diligent and judicious advertiſement of the occurrents of *Italy*. Nevertheleſs in the end of his time, he was partaker of the conſpiracy, which cardinal *Alphonſo Petrucci*, and ſome other cardinals, had plotted againſt the life of pope *Leo*. And this offence in itſelf ſo heinous, was yet in him aggravated by the motive thereof, which was not malice or diſcontent, but an aſpiring mind to the papacy. And in this height of impiety there wanted not an intermixture of levity and folly; for that (as was generally believed) he was animated to expect the papacy, by a fatal mockery, the prediction of a ſouth-ſayer, which was, that one ſhould ſucceed pope *Leo*, whoſe name ſhould be *Adrian*, an aged man of mean birth, and of great learning and wiſdom. By which character and figure he took himſelf to be deſcribed, though it were fulfilled of *Adrian* the *Fleming*, ſon of a *Dutch* brewer, cardinal of *Tortoſa*, and preceptor unto *Charles* the fifth; the ſame that not changing his chriſtian-name, was afterwards called *Adrian* the ſixth.

But theſe things happened in the year following, which was the fifth of this king. But in the end of the fourth year the king had called again his parliament, not as it ſeemeth for any particular occaſion of ſtate: But the former parliament being ended ſomewhat ſuddenly, in regard of the preparation for *Britain*, the king thought he had not remunerated his people ſufficiently with good laws, which evermore was his retribution for treaſure. And finding by the inſurrection in the north, there was diſcontentment abroad, in reſpect of the ſubſidy, he thought it good to give his ſubjects yet farther contentment and comfort in that kind. Certainly his times for good commonwealths laws did excel. So as he may juſtly be celebrated for the beſt law-giver to this nation; after king *Edward* the firſt: for his laws (whoſo marks them well) are deep, and not vulgar; not made upon the ſpur of a particular occaſion for the preſent, but out of providence of the future, to make the eſtate of his people ſtill more and more happy; after the manner of the legiſlators in ancient and heroical times.

First therefore he made a law, ſuitable to his own acts and times: for as himſelf had in his perſon and marriage made a final concord, in the great ſuit and title for the crown; ſo by this law he ſettled the like peace and quiet in the private poſſeſſions of the ſubjects: ordaining, that fines thenceforth

forth ſhould be final, to conclude all ſtrangers rights; and that upon fines levied, and ſolemnly proclaimed, the ſubject ſhould have his time of watch for five years after his title accrued; which if he forepaſſed, his right ſhould be bound for ever after; with ſome exception nevertheleſs of minors, married women, and ſuch incompetent perſons.

THIS ſtatute did in effect but reſtore an ancient ſtatute of the realm, which was it ſelf alſo made but in affirmance of the common law. The alteration had been by a ſtatute, commonly called the ſtatute of *non-claim*, made in the time of *Edward* the third. And ſurely this law was a kind of prognoſtick of the good peace, which ſince his time hath (for the moſt part) continued in this kingdom until this day: for ſtatutes of *non-claim* are fit for times of war, when mens heads are troubled, that they cannot intend their eſtate; but ſtatutes, that quiet poſſeſſions, are fitteſt for times of peace, to extinguiſh ſuits and contentions, which is one of the banes of peace.

ANOTHER ſtatute was made of ſingular policy, for the population apparently, and (if it be thoroughly conſidered) for the ſoldiery, and military forces of the realm.

ENCLOSURES at that time began to be more frequent, whereby arable land (which could not be manured without people and families) was turned into paſture, which was eaſily rid by a few herdſmen, and tenances for years, lives, and at will (whereupon much of the yeomanry lived) were turned into demeſns. This bred a decay of people, and (by conſequence) a decay of towns, churches, tithes, and the like. The king likewiſe knew full well, and in no wiſe forgot, that there enſued withal upon this a decay and diminution of ſubſidies and taxes; for the more gentlemen, ever the lower books of ſubſidies. In remedying of this inconvenience, the king's wiſdom was admirable, and the parliament's at that time. Encloſures they would not forbid, for that had been to forbid the improvement of the patrimony of the kingdom; nor tillage they would not compel, for that was to ſtrive with nature and utility: but they took a courſe to take away depopulating encloſures, and depopulating paſturage, and yet not by that name, or by any imperious expreſs prohibition, but by conſequence. The ordinance was, that all houſes of husbandry, that were uſed with twenty acres of ground and upwards, ſhould be maintain'd and kept up for ever; together with a competent proportion of land to be uſed and occupied with them; and in no wiſe to be ſevered from them, as by another ſtatute made afterwards in his ſucceſſor's time, was more fully declared: this upon forfeiture to be taken, not by way of popular action, but by ſeizure of the land it ſelf, by the king and lords of the fee, as to half the profits, till the houſes and land were reſtored. By this means the houſes being kept up, did of neceſſity enforce a dweller; and the proportion of land for occupation being kept up, did of neceſſity enforce that dweller not to be a beggar or cottager, but a man of ſome ſubſtance, that might keep hinds and ſervants, and ſet the plough on going. This did wonderfully concern the might and mannerhood of the kingdom, to have farms as it were of a ſtandard, ſufficient to maintain an able body out of penury, and did in effect amortize a great part of he lands of the kingdom unto the hold and occupation of the yeomanry or middle people, of a condition between gentlemen and cottagers or peaſants. Now, how much this did advance the military power of the kingdom, is apparent by the true principles of war, and the examples of other kingdoms. For it hath been held by the general opinion of men of beſt judgment

ment in the wars, (howſoever ſome few have varied, and that it may receive ſome diſtinction of caſe,) that the principal ſtrength of an army conſiſteth in the infantry or foot. And to make good infantry, it requireth men bred, not in a ſervile or indigent faſhion, but in ſome free and plentiful manner. Therefore if a ſtate run moſt to noblemen and gentlemen, and that the huſbandmen and ploughmen be but as their workfolks and labourers, or elſe mere cottagers, (which are but houſed beggars) you may have a good cavalry, but never good ſtable bands of foot; like to coppice woods, that if you leave in them ſtaddles too thick, they will run to buſhes and briars, and have little clean under-wood. And this is to be ſeen in *France* and *Italy*, and ſome other parts abroad, where in effect all is nobleſs or peaſantry. I ſpeak of people out of towns, and no middle people; and therefore no good forces of foot: inſomuch as they are enforced to employ mercenary bands of *Switzers*, and the like, for their battalions of foot. Whereby alſo it comes to paſs, that thoſe nations have much people, and few ſoldiers. Whereas the king ſaw, that contrariwiſe it would follow, that *England*, though much leſs in territory, yet ſhould have infinitely more ſoldiers of their native forces, than thoſe other nations have. Thus did the king ſecretly ſow *Hydra*'s teeth; whereupon (according to the poet's fiction) ſhould riſe up armed men for the ſervice of this kingdom.

The king alſo (having care to make his realm potent, as well by ſea as by land) for the better maintenance of the navy, ordained; that wines and woads from the parts of *Gaſcoign* and *Languedock*, ſhould not be brought but in *Engliſh* bottoms; bowing the ancient policy of this eſtate, from conſideration of plenty to conſideration of power. For that almoſt all the ancient ſtatutes incite by all means merchant-ſtrangers, to bring in all ſorts of commodities; having for end cheapneſs, and not looking to the point of ſtate concerning the naval power.

The king alſo made a ſtatute in that parliament, monitory and minatory, towards juſtices of peace, that they ſhould duly execute their office, inviting complaints againſt them, firſt to their fellow-juſtices, then to the juſtices of aſſize, then to the king or chancellor; and that a proclamation which he had publiſhed of that tenor, ſhould be read in open ſeſſions four times a year, to keep them awake. Meaning alſo to have his laws executed, and thereby to reap either obedience or forfeitures; (wherein towards his latter times he did decline too much to the left hand:) he did ordain remedy againſt the practice that was grown in uſe, to ſtop and damp informations upon penal laws, by procuring informations by colluſion to be put in by the confederates of the delinquents, to be faintly proſecuted, and let fall at pleaſure; and pleading them in bar of the informations, which were proſecuted with effect.

He made alſo laws for the correction of the mint, and counterfeiting of foreign coin current. And that no payment in gold ſhould be made to any merchant ſtranger, the better to keep treaſure within the realm, for that gold was the metal that lay in the leaſt room.

He made alſo ſtatutes for the maintenance of drapery, and the keeping of wool within the realm; and not only ſo, but for ſtinting and limiting the prices of cloth, one for the finer, and another for the coarſer ſort. Which I note, both becauſe it was a rare thing to ſet prices by ſtatute, eſpecially upon our home commodities; and becauſe of the wiſe model of this act, not preſcribing prices, but ſtinting them not to exceed a rate; that the clothier might drape accordingly as he might afford.

Divers

DIVERS other good ſtatutes were made that parliament, but theſe were the principal. And here I do deſire thoſe into whoſe hands this work ſhall fall, that they do take in good part my long inſiſting upon the laws that were made in this king's reign. Whereof I have theſe reaſons; both becauſe it was the preheminent virtue and merit of this king, to whoſe memory I do honour; and becauſe it hath ſome correſpondence to my perſon; but chiefly, becauſe (in my judgment) it is ſome defect even in the beſt writers of hiſtory, that they do not often enough ſummarily deliver and ſet down the moſt memorable laws that paſſed in the times whereof they writ, being indeed the principal acts of peace. For though they may be had in original books of law themſelves; yet that informeth not the judgment of kings and counſellors, and perſons of eſtate, ſo well as to ſee them deſcribed, and entered in the table and pourtrait of the times.

ABOUT the ſame time, the king had a loan from the city of four thouſand pounds; which was double to that they lent before, and was duly and orderly paid back at the day, as the former likewiſe had been: The king ever chuſing rather to borrow too ſoon, than to pay too late, and ſo keeping up his credit.

NEITHER had the king yet caſt off his cares and hopes touching *Britain*, but thought to maſter the occaſion by policy, though his arms had been unfortunate; and to bereave the *French* king of the fruit of his victory. The ſum of his deſign was, to encourage *Maximilian* to go on with his ſuit, for the marriage of *Anne*, the heir of *Britain*, and to aid him to the conſummation thereof. But the affairs of *Maximilian* were at that time in great trouble and combuſtion, by a rebellion of his ſubjects in *Flanders*; eſpecially thoſe of *Bruges* and *Gaunt*, whereof the town of *Bruges* (at ſuch time as *Maximilian* was there in perſon) had ſuddenly armed in tumult, and ſlain ſome of his principal officers, and taken himſelf priſoner, and held him in durance, till they had enforced him and ſome of his counſellors, to take a ſolemn oath to pardon all their offences, and never to queſtion and revenge the ſame in time to come. Nevertheleſs *Frederick* the emperor would not ſuffer this reproach and indignity offered to his ſon, to paſs, but made ſharp wars upon *Flanders*, to reclaim and chaſtiſe the rebels. But the lord *Ravenſtein*, a principal perſon about *Maximilian*, and one that had taken the oath of abolition with his maſter, pretending the religion thereof, but indeed upon private ambition, and (as it was thought) inſtigated and corrupted from *France*, forſook the emperor and *Maximilian* his lord, and made himſelf an head of the popular party, and ſeized upon the towns of *Ipres* and *Sluice*, with both the caſtles: And forthwith ſent to the lord *Cordes*, governour of *Picardy* under the *French* king, to deſire aid; and to move him, that he, on the behalf of the *French* king, would be protector of the united towns, and by force of arms reduce the reſt. The lord *Cordes* was ready to embrace the occaſion, which was partly of his own ſetting, and ſent forthwith greater forces, than it had been poſſible for him to raiſe on the ſudden, if he had not looked for ſuch a ſummons before in aid of the lord *Ravenſtein* and the *Flemings*, with inſtructions to inveſt the towns between *France* and *Bruges*. The *French* forces beſieged a little town called *Dixmude*, where part of the *Flemiſh* forces joined with them. While they lay at this ſiege, the king of *England*, upon pretence of the ſafety of the *Engliſh* pale about *Calais*, but in truth being loth that *Maximilian* ſhould become contemptible, and thereby be ſhaken off by the ſtates of *Britain* about this marriage, ſent over the lord *Morley* with a thouſand men, unto

the lord *D'Aubigny*, then deputy of *Calice*, with ſecret inſtructions to aid *Maximilian*, and to raiſe the Siege of *Dixmude*. The lord *D'Aubigny* (giving it out that all was for the ſtrengthening of the *Engliſh* marches) drew out of the garriſons of *Calice*, *Hammes* and *Guines*, to the number of a thouſand men more. So that with the freſh ſuccours that came under the conduct of the lord *Morley*, they made up to the number of two thouſand, or better. Which forces joining with ſome companies of *Almains*, put themſelves into *Dixmude*, not perceived by the enemies; and paſſing through the town with ſome reinforcement, (from the forces that were in the town) aſſailed the enemies camp negligently guarded, as being out of fear; where there was a bloody fight, in which the *Engliſh* and their partakers obtained the victory, and ſlew to the number of eight thouſand men, with the loſs on the *Engliſh* part of a hundred or thereabouts; amongſt whom was the lord *Morley*. They took alſo their great ordnance, with much rich ſpoils, which they carried to *Newport*; whence the lord *D'Aubigny* returned to *Calice*, leaving the hurt men and ſome other voluntaries in *Newport*. But the lord *Cordes* being at *Ipres* with a great power of men, thinking to recover the loſs and diſgrace of the fight at *Dixmude*, came preſently on, and ſat down before *Newport*, and beſieged it; and after ſome days ſiege, he reſolved to try the fortune of an aſſault. Which he did one day, and ſucceeded therein ſo far, that he had taken the principal tower and fort in that city, and planted upon it the *French* banner. Whence nevertheleſs they were preſently beaten forth by the *Engliſh*, by the help of ſome freſh ſuccours of archers, arriving by good fortune (at the inſtant) in the haven of *Newport*. Whereupon the lord *Cordes* diſcouraged, and meaſuring the new ſuccours (which were ſmall) by the ſucceſs, (which was great) levied his ſiege. By this means matters grew more exaſperate between the two kings of *England* and *France*, for that in the war of *Flanders*, the auxiliary forces of *French* and *Engliſh* were much blooded one againſt another. Which blood rankled the more, by the vain words of the lord *Cordes*, that declared himſelf an open enemy of the *Engliſh*, beyond that that appertained to the preſent ſervice; making it a common by-word of his, that he would be content to lie in hell ſeven years, ſo he might win *Calice* from the *Engliſh*.

The king having thus upheld the Reputation of *Maximilian*, adviſed him now to preſs on his marriage with *Britain* to a concluſion. Which *Maximilian* accordingly did, and ſo far forth prevailed, both with the young lady, and with the principal perſons about her, as the marriage was conſummated by proxy, with a ceremony at that time in theſe parts new. For ſhe was not only publickly contracted, but ſtated as a bride, and ſolemnly bedded; and after ſhe was laid, there came in *Maximilian*'s embaſſador with letters of procuration, and in the preſence of ſundry noble perſonages, men and women, put his leg (ſtript naked to the knee) between the eſpouſal ſheets; to the end, that that ceremony might be thought to amount to a conſummation and actual knowledge. This done, *Maximilian* (whoſe property was to leave things then when they were almoſt come to perfection, and to end them by imagination; like ill archers, that draw not their arrows up to the head; and who might as eaſily have bedded the lady himſelf, as to have made a play and diſguiſe of it) thinking now all aſſured, neglected for a time his farther proceeding, and intended his wars. Mean while the *French* king (conſulting with his divines, and finding that this pretended conſummation was rather an invention of court, than any ways valid by the laws of the church) went more really to work, and by ſecret inſtruments

and

and cunning agents, as well matrons about the young lady as counſellors, firſt ſought to remove the point of religion and honour out of the mind of the lady her ſelf, wherein there was a double labour. For *Maximilian* was not only contracted unto the lady, but *Maximilian*'s daughter was likewiſe contracted to king *Charles*. So as the marriage halted upon both feet, and was not clear on either ſide. But for the contract with king *Charles*, the exception lay plain and fair; for that *Maximilian*'s daughter was under years of conſent, and ſo not bound by law, but a power of diſagreement left to either part. But for the contract made by *Maximilian* with the lady her ſelf, they were harder driven: having nothing to allege, but that it was done without the conſent of her ſovereign lord king *Charles*, whoſe ward and client ſhe was, and he to her in place of a father; and therefore it was void and of no force for want of ſuch conſent. Which defect (they ſaid) though it would not evacuate a marriage after cohabitation, and actual conſummation; yet it was enough to make void a contract. For as for the pretended conſummation, they made ſport with it, and ſaid: that it was an argument that *Maximilian* was a widower, and a cold woer, that could content himſelf to be a bridegroom by deputy, and would not make a little journey to put all out of queſtion. So that the young lady, wrought upon by theſe reaſons, finely inſtilled by ſuch as the *French* king (who ſpared for no rewards or promiſes) had made on his ſide; and allured likewiſe by the preſent glory and greatneſs of king *Charles*, (being alſo a young king and a batchelor) and loth to make her countrey the ſeat of a long and miſerable war; ſecretly yielded to accept of king *Charles*. But during this ſecret treaty with the lady, the better to ſave it from blaſts of oppoſition and interruption, king *Charles* reſorting to his wonted arts, and thinking to carry the marriage as he had carried the wars, by entertaining the king of *England* in vain belief, ſent a ſolemn embaſſage by *Francis* lord of *Luxemburgh*, *Charles Marignian*, and *Robert Gagvien*, general of the order of the *bonnes-hommes* of the Trinity, to treat a peace and league with the king; accoupling it with an article in the nature of a requeſt, that the *French* king might with the king's good-will (according unto his right of ſeigniory and tutelage) diſpoſe of the marriage of the young ducheſs of *Britain*, as he ſhould think good; offering by a judicial proceeding, to make void the marriage of *Maximilian* by proxy. Alſo all this while the better to amuſe the world, he did continue in his court and cuſtody the daughter of *Maximilian*, who formerly had been ſent unto him, to be bred and educated in *France*; not diſmiſſing or renvoying her, but contrariwiſe profeſſing and giving out ſtrongly, that he meant to proceed with that match. And that for the ducheſs of *Britain*, he deſired only to preſerve his right of ſeigniory, and to give her in marriage to ſome ſuch ally as might depend upon him.

When the three commiſſioners came to the court of *England*, they delivered their embaſſage unto the king, who remitted them to his council; where ſome days after they had audience, and made their propoſition by the prior of the Trinity (who though he were third in place, yet was held the beſt ſpeaker of them) to this effect.

My lords, the king our maſter, the greateſt and mightieſt king that reigned in *France* ſince *Charles* the Great, (whoſe name he beareth) hath nevertheleſs thought it no diſparagement to his greatneſs at this time to propound a peace; yea, and to pray a peace with the king of *England*. For which purpoſe he hath ſent us his commiſſioners, inſtructed and enabled with full

and ample power to treat and conclude; giving us farther in charge, to open in ſome other buſineſs the ſecrets of his own intentions. Theſe be indeed the precious love tokens between great kings, to communicate one with another the true ſtate of their affairs, and to paſs by nice points of honour, which ought not to give law unto affection. This I do aſſure your lordſhips; it is not poſſible for you to imagine the true and cordial love that the king our maſter beareth to your ſovereign, except you were near him as we are. He uſeth his name with ſo great reſpect; he remembreth their firſt acquaintance at *Paris* with ſo great contentment; nay, he never ſpeaks of him, but that preſently he falls into diſcourſe of the miſeries of great kings, in that they cannot converſe with their equals, but with ſervants. This affection to your king's perſon and virtues, God hath put into the heart of our maſter, no doubt for the good of *Chriſtendom*, and for purpoſes yet unknown to us all. For other root it cannot have, ſince it was the ſame to the earl of *Richmond*, that it is now to the king of *England*. This is therefore the firſt motive that makes our king to deſire peace and league with your ſovereign: good affection, and ſomewhat that he finds in his own heart. This affection is alſo armed with reaſon of eſtate. For our king doth in all candor and frankneſs of dealing open himſelf unto you; that having an honourable, yea, and an holy purpoſe, to make a voyage and war in remote parts, he conſidereth that it will be of no ſmall effect, in point of reputation to his enterprize, if it be known abroad that he is in good peace with all his neighbour princes, and eſpecially with the king of *England*, whom for good cauſes he eſteemeth moſt.

But now (my lords) give me leave to uſe a few words to remove all ſcruples and miſunderſtandings, between your ſovereign and ours, concerning ſome late actions; which if they be not cleared, may perhaps hinder this peace. To the end, that for matters paſt, neither king may conceive unkindneſs of other, nor think the other conceiveth unkindneſs of him. The late actions are two; that of *Britain*, and that of *Flanders*. In both which it is true, that the ſubjects ſwords of both kings have encounter'd and ſtricken, and the ways and inclinations alſo of the two kings, in reſpect of their confederates and allies, have ſevered.

For that of *Britain*, the king your ſovereign knoweth beſt what hath paſſed. It was a war of neceſſity on our maſter's part. And though the motives of it were ſharp and piquant as could be, yet did he make that war rather with an olive-branch, than a laurel-branch in his hand, more deſiring peace than victory. Beſides, from time to time he ſent (as it were) blank papers to your king, to write the conditions of peace. For though both his honour and ſafety went upon it, yet he thought neither of them too precious to put into the king of *England*'s hands. Neither doth our king on the other ſide make any unfriendly interpretation, of your king's ſending of ſuccours to the duke of *Britain*; for the king knoweth well, that many things muſt be done of kings for ſatisfaction of their people; and it is not hard to diſcern what is a king's own. But this matter of *Britain* is now (by the act of God) ended and paſſed; and (as the king hopeth) like the way of a ſhip in the ſea, without leaving any impreſſion in either of the kings minds; as he is ſure for his part it hath not done in his.

For the action of *Flanders*: as the former of *Britain* was a war of neceſſity, ſo this was a war of juſtice; which with a good king is of equal neceſſity with danger of eſtate, for elſe he ſhould leave to be a king. The ſubjects of *Burgundy* are ſubjects in chief to the crown of *France*, and their duke

duke the homager and vaſſal of *France*. They had wont to be good ſubjects, howſoever *Maximilian* hath of late diſtemper'd them. They fled to the king for juſtice and deliverance from oppreſſion. Juſtice he could not deny; purchaſe he did not ſeek. This was good for *Maximilian*, if he could have ſeen it in people mutinied, to arreſt fury, and prevent deſpair. My lords, it may be this I have ſaid is needleſs, ſave that the king our maſter is tender in any thing, that may but glance upon the friendſhip of *England*. The amity between the two kings (no doubt) ſtands entire and inviolate: and that their ſubjects ſwords have claſhed, it is nothing unto the publick peace of the crowns; it being a thing very uſual in auxiliary forces of the beſt and ſtraiteſt confederates, to meet and draw blood in the field. Nay, many times there be aids of the ſame nation on both ſides, and yet it is not (for all that) a kingdom divided in it ſelf.

It reſteth (my lords) that I impart unto you a matter, that I know your lordſhips all will much rejoice to hear; as that which importeth the Chriſtian commonweal more, than any action that hath happened of long time. The king our maſter hath a purpoſe and determination, to make war upon the kingdom of *Naples*; being now in the poſſeſſion of a baſtard ſlip of *Arragon*, but appertaining unto his majeſty, by clear and undoubted right; which if he ſhould not by juſt arms ſeek to recover, he could neither acquit his honour nor anſwer it to his people. But his noble and chriſtian thoughts reſt not here: for his reſolution and hope is, to make the reconqueſt of *Naples*, but as a bridge to tranſport his forces into *Graecia*; and not to ſpare blood or treaſure (if it were to the impawning of his crown, and diſpeopling of *France)* till either he hath overthrown the empire of the *Ottomans*, or taken it in his way to paradiſe. The king knoweth well, that this is a deſign that could not ariſe in the mind of any king, that did not ſtedfaſtly look up unto God, whoſe quarrel this is, and from whom cometh both the will and the deed. But yet it is agreeable to the perſon that he beareth (though unworthy) of the thrice Chriſtian king, and the eldeſt ſon of the church. Whereunto he is alſo invited by the example (in more ancient time) of king *Henry* the fourth of *England*, (the firſt renowned king of the houſe of *Lancaſter*; anceſtor, though not progenitor to your king) who had a purpoſe towards the end of his time, as you know better, to make an expedition into the *Holy-land*; and by the example alſo (preſent before his eyes) of that honourable and religious war which the king of *Spain* now maketh, and hath almoſt brought to perfection, for the recovery of the realm of *Granada* from the *Moors*. And although this enterprize may ſeem vaſt and unmeaſured, for the king to attempt that by his own forces, wherein heretofore a conjunction of moſt of the Chriſtian princes hath found work enough; yet his majeſty wiſely conſidereth, that ſometimes ſmaller forces being united under one command, are more effectual in proof, (though not ſo promiſing in opinion and fame,) than much greater forces, variouſly compounded by aſſociations and leagues, which commonly in a ſhort time after their beginnings, turn to diſſociations and diviſions. But, my lords, that which is as a voice from heaven, that calleth the king to this enterprize, is a rent at this time in the houſe of the *Ottomans*. I do not ſay but there hath been brother againſt brother in that houſe before, but never any that had refuge to the arms of the Chriſtians, as now hath *Gemes*, (brother unto *Bajazet* that reigneth) the far braver man of the two, the other being between a monk and a philoſopher, and better read in the *Alcoran* and *Averroes*, than able to wield the ſcepter of ſo war-like an empire. This therefore is the king

king our maſter's memorable and heroical reſolution for an holy war. And becauſe he carrieth in this the perſon of a Chriſtian ſoldier, as well as of a great temporal monarch, he beginneth with humility, and is content for this cauſe, to beg peace at the hands of other Chriſtian kings. There remaineth only rather a civil requeſt, than any eſſential part of our negotiation, which the king maketh to the king your ſovereign. The king (as all the world knoweth) is lord in chief of the duchy of *Britain*. The marriage of the heir belongeth to him as guardian. This is a private patrimonial right, and no buſineſs of eſtate: yet nevertheleſs (to run a fair courſe with your king, whom he deſires to make another himſelf, and to be one and the ſame thing with him) his requeſt is, that with the king's favour and conſent, he may diſpoſe of her in marriage, as he thinketh good, and make void the intruded and pretended marriage of *Maximilian*, according to juſtice. This (my lords) is all that I have to ſay, deſiring your pardon for my weakneſs in the delivery.

THUS did the *French* embaſſadors, with great ſhew of their king's affection, and many ſugar'd words, ſeek to addulce all matters between the two kings, having two things for their ends; the one to keep the king quiet till the marriage of *Britain* was paſt; and this was but a ſummer fruit, which they thonght was almoſt ripe, and would be ſoon gathered. The other was more laſting; and that was to put him into ſuch a temper, as he might be no diſturbance or impediment to the voyage for *Italy*. The lords of the council were ſilent; and ſaid only, that they knew the embaſſadors would look for no anſwer, till they had reported to the king; and ſo they roſe from council. The king could not well tell what to think of the marriage of *Britain*. He ſaw plainly the ambition of the *French* king was, to impatronize himſelf of the duchy; but he wonder'd he would bring into his houſe a litigious marriage, eſpecially conſidering who was his ſucceſſor. But weighing one thing with another he gave *Britain* for loſt; but reſolved to make his profit of this buſineſs of *Britain*, as a quarrel for war; and that of *Naples*, as a wrench and mean for peace; being well advertiſed, how ſtrongly the king was bent upon that action. Having therefore conferred divers times with his council, and keeping himſelf ſomewhat cloſe, he gave direction to the chancellor, for a formal anſwer to the embaſſadors, and that he did in the preſence of his council. And after calling the chancellor to him apart, bid him ſpeak in ſuch language, as was fit for a treaty that was to end in a breach; and gave him alſo a ſpecial *caveat*, that he ſhould not uſe any words to diſcourage the voyage of *Italy*. Soon after the embaſſadors were ſent for to the council, and the lord chancellor ſpake to them in this ſort:

MY lords embaſſadors, I ſhall make anſwer by the king's commandment, unto the eloquent declaration of you my lord prior, in a brief and plain manner. The king forgetteth not his former love and acquaintance with the king your maſter: but of this there needeth no repetition. For if it be between them as it was, it is well; if there be any alteration, it is not words that will make it up.

FOR the buſineſs of *Britain*, the king findeth it a little ſtrange, that the *French* king maketh mention of it as matter of well-deſerving at his hand: for that deſerving was no more, but to make him his inſtrument to ſurprize one of his beſt confederates. And for the marriage the king would not

not meddle in it, if your maſter would marry by the book, and not by the ſword.

For that of *Flanders*, if the ſubjects of *Burgundy* had appealed to your king as their chief lord, at firſt by way of ſupplication, it might have had a ſhew of juſtice: but it was a new form of proceſs, for ſubjects to impriſon their prince firſt, and to ſlay his officers, and then to be complainants. The king ſaith, that ſure he is, when the *French* king and himſelf ſent to the ſubjects of *Scotland*, (that had taken arms againſt their king) they both ſpake in another ſtyle, and did in princely manner ſignify their deteſtation of popular attentates upon the perſon or authority of princes. But my lords embaſſadors, the king leaveth theſe two actions thus: that on the one ſide, he hath not received any manner of ſatisfaction from you concerning them; and on the other, that he doth not apprehend them ſo deeply, as in reſpect of them, to refuſe to treat of peace, if other things may go hand in hand. As for the war of *Naples*, and the deſign againſt the *Turk*; the king hath commanded me expreſsly to ſay, that he doth wiſh with all his heart, to his good brother the *French* king, that his fortunes may ſucceed, according to his hopes, and honourable intentions. And whenſoever he ſhall hear that he is prepared for *Graecia*, as your maſter is pleaſed now to ſay, that he beggeth a peace of the king, ſo the king will then beg of him a part in that war.

But now my lords embaſſadors, I am to propound unto you ſomewhat on the king's part: the king your maſter hath taught our king what to ſay and demand. You ſay (my lord prior) that your king is reſolved to recover his right to *Naples*, wrongfully detained from him. And that if he ſhould not thus do, he could not acquit his honour, nor anſwer it to his people. Think (my lords) that the king our maſter ſaith the ſame thing over again to you, touching *Normandy*, *Guienne*, *Anjou*, yea, and the kingdom of *France* it ſelf. I cannot expreſs it better than in your own words. If therefore the *French* king ſhall conſent, that the king our maſter's title to *France*, (at leaſt tribute for the ſame) be handled in the treaty, the king is content to go on with the reſt, otherwiſe he refuſeth to treat.

The embaſſadors being ſomewhat abaſhed with this demand, anſwered in ſome heat; that they doubted not, but the king their ſovereign's ſword would be able to maintain his ſcepter: and they aſſured themſelves, he neither could nor would yield to any diminution of the crown of *France*, either in territory or regality: but howſoever they were too great matters for them to ſpeak of, having no commiſſion. It was replied, that the king looked for no other anſwer from them, but would forthwith ſend his own embaſſadors to the *French* king. There was a queſtion alſo aſked at the table; whether the *French* king would agree to have the diſpoſing of the marriage of *Britain* with an exception and excluſion, that he ſhould not marry her himſelf? To which the embaſſadors anſwered; that it was ſo far out of their king's thoughts, as they had received no inſtructions touching the ſame. Thus were the embaſſadors diſmiſſed, all ſave the prior; and were followed immediately by *Thomas* earl of *Ormond*, and *Thomas Goldenſton* prior of *Chriſt-church* in *Canterbury*, who were preſently ſent over into *France*. In the mean ſpace *Lionel* biſhop of *Concordia* was ſent as nuncio from pope *Alexander* the ſixth to both kings, to move a peace between them. For pope *Alexander* finding himſelf pent and lock'd up, by a league and aſſociation of the principal ſtates of *Italy*, that he could not make his way for the advancement

advancement of his own houſe, (which he immoderately thirſted after) was deſirous to trouble the waters in *Italy*, that he might fiſh the better; caſting the net, not out of ſaint *Peter*'s, but out of *Borgia*'s bark. And doubting leſt the fears from *England* might ſtay the *French* king's voyage into *Italy*, diſpatched this biſhop, to compoſe all matters between the two kings, if he could: who firſt repaired to the *French* king, and finding him well inclined, (as he conceived) took on his journey towards *England*, and found the *Engliſh* embaſſadors at *Calais*, on their way towards the *French* king. After ſome conference with them, he was in honourable manner tranſported over into *England*, where he had audience of the king. But notwithſtanding he had a good ominous name to have made a peace, nothing followed: for in the mean time the purpoſe of the *French* king to marry the ducheſs, could be no longer diſſembled. Wherefore the *Engliſh* embaſſadors (finding how things went) took their leave and returned. And the prior alſo was warned from hence to depart out of *England*. Who when he turned his back (more like a pedant than an embaſſador) diſperſed a bitter libel, in *Latin* verſe, againſt the king; unto which the king (though he had nothing of a pedant) was yet content to cauſe an anſwer to be made in like verſe; and that as ſpeaking in his own perſon, but in a ſtyle of ſcorn and ſport. About this time alſo was born the king's ſecond ſon *Henry*, who afterwards reigned. And ſoon after followed the ſolemnization of the marriage between *Charles* and *Anne* ducheſs of *Britain*, with whom he received the duchy of *Britain* as her dowry, the daughter of *Maximilian* being a little before ſent home. Which when it came to the ears of *Maximilian*, (who would never believe it till it was done, being ever the principal in deceiving himſelf, though in this the *French* king did very handſomly ſecond it,) in tumbling it over and over in his thoughts, that he ſhould at one blow (with ſuch a double ſcorn) be defeated, both of the marriage of his daughter and his own, (upon both which he had fixed high imaginations,) he loſt all patience, and caſting off the reſpects fit to be continued between great kings, even when their blood is hotteſt, and moſt riſen,) fell to bitter invectives againſt the perſon and actions of the *French* king. And (by how much he was the leſs able to do, talking ſo much the more) ſpake all the injuries he could deviſe of *Charles*, ſaying; that he was the moſt perfidious man upon the earth, and that he had made a marriage compounded between an advowtry and a rape; which was done (he ſaid) by the juſt judgment of God; to the end that (the nullity thereof being ſo apparent to all the world) the race of ſo unworthy a Perſon might not reign in *France*. And forthwith he ſent embaſſadors as well to the king of *England*, as to the king of *Spain*, to incite them to war, and to treat a league offenſive againſt *France*, promiſing to concur with great forces of his own. Hereupon the king of *England* (going nevertheleſs his own way,) called a parliament, it being the ſeventh year of his reign; and the firſt day of opening thereof (ſitting under his cloth of ſtate) ſpake himſelf unto his lords and commons, in this manner:

My lords, and you the commons, when I purpoſed to make a war in *Britain* by my lieutenant, I made declaration thereof to you by my chancellor. But now that I mean to make a war upon *France* in perſon, I will declare it to you my ſelf. That war was to defend another man's right, but this is to recover our own; and that ended by accident, but we hope this ſhall end in victory.

THE *French* king troubles the Chriſtian world: that which he hath is not his own, and yet he ſeeketh more. He hath inveſted himſelf of *Britain:* He maintaineth the rebels in *Flanders*; and he threatneth *Italy*. For our ſelves, he hath proceeded from diſſimulation, to neglect; and from neglect, to contumely. He hath aſſailed our confederates: he denieth our tribute: in a word, he ſeeks war: ſo did not his father, but ſought peace at our hands; and ſo perhaps will he, when good counſel or time ſhall make him ſee as much as his father did.

MEAN while, let us make his ambition our advantage; and let us not ſtand upon a few crowns of tribute, or acknowledgment, but (by the favour of Almighty God) try our right for the crown of *France* it ſelf; remembring that there hath been a *French* king priſoner in *England*, and a king of *England* crowned in *France*. Our confederates are not diminiſhed. *Burgundy* is in a mightier hand than ever, and never more provoked. *Britain* cannot help us, but it may hurt them. New acqueſts are more burthen than ſtrength. The malecontents of his own kingdom have not been baſe, popular, nor titulary impoſtors, but of an higher nature. The king of *Spain* (doubt ye not) will join with us, not knowing where the *French* king's ambition will ſtay. Our holy father the pope likes no Tramontanes in *Italy*. But howſoever it be, this matter of confederates, is rather to be thought on, than reckon'd on. For God forbid but *England* ſhould be able to get reaſon of *France* without a ſecond.

AT the battels of *Creſſy*, *Poictiers*, *Agencourt*, we were of our ſelves. *France* hath much people, and few ſoldiers. They have no ſtable bands of foot. Some good horſe they have; but thoſe are forces which are leaſt fit for a defenſive war, where the actions are in the aſſailant's choice. It was our diſcords only that loſt *France*; and (by the power of God) it is the good peace which we now enjoy, that will recover it. God hath hitherto bleſſed my ſword. I have in this time that I have reigned, weeded out my bad ſubjects, and tryed my good. My people and I know one another, which breeds confidence: And if there ſhould be any bad blood left in the kingdom, an honourable foreign war will vent it, or purify it. In this great buſineſs, let me have your advice and aid. If any of you were to make his ſon knight, you might have aid of your tenants by law. This concerns the knighthood and ſpurs of the kingdom, whereof I am father; and bound not only to ſeek to maintain it, but to advance it: but for matter of treaſure, let it not be taken from the pooreſt ſort, but from thoſe to whom the benefit of the war may redound. *France* is no wilderneſs; and I, that profeſs good huſbandry, hope to make the war (after the beginnings) to pay it ſelf. Go together in God's name, and loſe no time; for I have called this parliament wholly for this cauſe.

THUS ſpake the king; but for all this, though he ſhewed great forwardneſs for a war, not only to his parliament and court, but to his privy council likewiſe, (except the two biſhops and a few more;) yet nevertheleſs in his ſecret intentions, he had no purpoſe to go through with any war upon *France*. But the truth was, that he did but traffick with that war, to make his return in money. He knew well, that *France* was now entire and at unity with it ſelf, and never ſo mighty many years before. He ſaw by the taſte that he had of his forces ſent into *Britain*, that the *French* knew well enough how to make war with the *Engliſh*, by not putting things to the hazard of a battel, but wearing them by long ſieges of towns, and ſtrong

fortified encampings. *James* the third of *Scotland*, (his true friend and confederate) gone; and *James* the fourth (that had succeeded) wholly at the devotion of *France*, and ill affected towards him. As for the conjunctions of *Ferdinando* of *Spain*, and *Maximilian*, he could make no foundation upon them. For the one had power, and not will; and the other had will, and not power. Besides that, *Ferdinando* had but newly taken breath from the war with the *Moors*; and merchanded at this time with *France*, for the restoring of the counties of *Russignon* and *Perpignan* oppignorated to the *French*. Neither was he out of fear of the discontents and ill blood within the realm; which having used always to repress and appease in person, he was loth they should find him at a distance beyond sea, and engaged in war. Finding therefore the inconveniencies and difficulties in the prosecution of a war, he cast with himself how to compass two things. The one, how by the declaration and inchoation of a war to make his profit. The other, how to come off from the war with saving of his honour. For profit, it was to be made two ways; upon his subjects for the war, and upon his enemies for the peace; like a good merchant, that maketh his gain both upon the commodities exported, and imported back again. For the point of honour, wherein he might suffer for giving over the war; he considered well, that as he could not trust upon the aids of *Ferdinando* and *Maximilian* for supports of war; so the impuissance of the one, and the double proceeding of the other, lay fair for him for occasions to accept of peace. These things he did wisely foresee, and did as artificially conduct, whereby all things fell into his lap as he desired.

For as for the parliament, it presently took fire, being affectionate (of old) to the war of *France*; and desirous afresh to repair the dishonour they thought the king sustained by the loss of *Britain*. Therefore they advised the king (with great alacrity) to undertake the war of *France*. And although the parliament consisted of the first and second nobility (together with principal citizens and townsmen) yet worthily and justly respecting more the people (whose deputies they were) than their own private persons, and finding by the lord chancellor's speech the king's inclination that way; they consented that commissioners should go forth for the gathering and levying of a benevolence from the more able sort. This tax (called a benevolence) was devised by *Edward* the fourth, for which he sustained much envy. It was abolished by *Richard* the third by act of parliament, to ingratiate himself with the people; and it was now revived by the king, but with consent of parliament, for so it was not in the time of king *Edward* the fourth. But by this way he raised exceeding great sums. Insomuch as the city of *London* (in those days) contributed nine thousand pounds and better; and that chiefly levied upon the wealthier sort. There is a tradition of a *dilemma*, that bishop *Morton* the chancellor used, to raise up the benevolence to higher rates; and some called it his fork, and some his crotch. For he had couched an article in the instructions to the commissioners who were to levy the benevolence; that if they met with any that were sparing, they should tell them, that they must needs have, because they laid up; and if they were spenders, they must needs have, because it was seen in their port and manner of living. So neither kind came amiss.

This parliament was merely a parliament of war; for it was in substance but a declaration of war against *France* and *Scotland*, with some statutes conducing thereunto; as the severe punishing of mort-pays, and keeping back of soldiers wages in captains. The like severity for the departure of

of ſoldiers without licence; ſtrengthening of the common law in favour of protections, for thoſe that were in the king's ſervice; and the ſetting the gate open and wide, for men to ſell or mortgage their lands without fines for alienation, to furniſh themſelves with money for the war; and laſtly, the voiding of all *Scottiſh* men out of *England*. There was alſo a ſtatute for the diſperſing of the ſtandard of the exchequer throughout *England*; thereby to ſize weights and meaſures; and two or three more of leſs importance.

After the Parliament was broken up, (which laſted not long) the king went on with his preparations for the war of *France*; yet neglected not in the mean time the affairs of *Maximilian* for the quieting of *Flanders*, and reſtoring him to his authority amongſt his ſubjects. For at that time the lord of *Ravenſtein*, being not only a ſubject rebelled, but a ſervant revolted, (and ſo much the more malicious and violent, by the aid of *Bruges* and *Gaunt*) had taken the town and both the caſtles of *Sluice*; as we ſaid before.

And having (by the commodity of the haven) gotten together certain ſhips and barks, fell to a kind of piratical trade; robbing and ſpoiling, and taking priſoners the ſhips and veſſels of all nations that paſſed along that coaſt, towards the mart of *Antwerp*, or into any part of *Brabant*, *Zeland*, or *Friezland*; being ever well victualled from *Picardy*, beſides the commodity of victuals from *Sluice*, and the countrey adjacent, and the avails of his own Prizes. The *French* aſſiſted him ſtill under-hand; and he likewiſe (as all men do that have been of both ſides) thought himſelf not ſafe, except he depended upon a third Perſon.

There was a ſmall town ſome two miles from *Bruges* towards the ſea, called *Dam*; which was a fort and approach to *Bruges*; and had a relation alſo to *Sluice*. This town the king of the *Romans* had attempted often (not for any worth of the town in it ſelf, but becauſe it might choak *Bruges*, and cut it off from the ſea) and ever failed. But therewith the duke of *Saxony* came down into *Flanders*, taking upon him the perſon of an umpire, to compoſe things between *Maximilian* and his ſubjects; but being (indeed) faſt and aſſured to *Maximilian*. Upon this pretext of neutrality and treaty, he repaired to *Bruges*; deſiring of the ſtates of *Bruges*, to enter peaceably into their town, with a retinue of ſome number of men of arms fit for his eſtate; being ſomewhat the more (as he ſaid) the better to guard him in a countrey that was up in arms: and bearing them in hand, that he was to communicate with them of divers matters of great importance for their good. Which having obtained of them, he ſent his carriages and harbingers before him, to provide his Lodging. So that his men of war entered the city in good array, but in peaceable manner, and he followed. They that went before enquired ſtill for inns and lodgings, as if they would have reſted there all night; and ſo went on till they came to the gate that leadeth directly towards *Dam*; and they of *Bruges* only gazed upon them, and gave them paſſage. The captains and inhabitants of *Dam* alſo ſuſpected no harm, from any that paſſed through *Bruges*; and diſcovering forces afar off, ſuppoſed they had been ſome ſuccours that were come from their friends, knowing ſome dangers towards them. And ſo perceiving nothing but well till it was too late, ſuffered them to enter their town. By which kind of ſleight, rather than ſtratagem, the town of *Dam* was taken, and the town of *Bruges* ſhrewdly blockt up, whereby they took great diſcouragement.

THE duke of *Saxony* having won the town of *Dam*, ſent immediately to the king to let him know, that it was *Sluice* chiefly, and the lord *Ravenſtein*, that kept the rebellion of *Flanders* in life: and that if it pleaſed the king to beſiege it by ſea, he alſo would beſiege it by land, and ſo cut out the core of thoſe wars.

THE king willing to uphold the authority of *Maximilian*, (the better to hold *France* in awe) and being likewiſe ſued unto by his merchants, for that the ſeas were much infeſted by the barks of the lord *Ravenſtein*; ſent ſtraightways ſir *Edward Poynings*, a valiant man, and of good ſervice, with twelve ſhips, well furniſhed with ſoldiers and artillery, to clear the ſeas, and to beſiege *Sluice* on that part. The *Engliſhmen* did not only coop up the lord *Ravenſtein*, that he ſtirred not, and likewiſe hold in ſtrait ſiege the maritime part of the town; but alſo aſſailed one of the caſtles, and renewed the aſſault ſo for twenty days ſpace (iſſuing ſtill out of their ſhips at the ebb) as they made great ſlaughter of them of the caſtle; who continually fought with them to repulſe them, though of the *Engliſh* part alſo were ſlain a brother of the earl of *Oxford*'s, and ſome fifty more.

BUT the ſiege ſtill continuing more and more ſtrait, and both the caſtles (which were the principal ſtrength of the town) being diſtreſſed, the one by the duke of *Saxony*, and the other by the *Engliſh*; and a bridge of boats, which the lord *Ravenſtein* had made between both caſtles, whereby ſuccours and relief might paſs from the one to the other, being on a night ſet on fire by the *Engliſh*; he deſpairing to hold the town, yielded (at the laſt) the caſtles to the *Engliſh*, and the town to the duke of *Saxony*, by compoſition. Which done, the duke of *Saxony* and ſir *Edward Poynings*, treated with them of *Bruges*, to ſubmit themſelves to *Maximilian* their lord; which after ſome time they did, paying (in ſome good part) the charge of the war, whereby the *Almains* and foreign ſuccours were diſmiſſed. The example of *Bruges*, other of the revolted towns followed; ſo that *Maximilian* grew to be out of danger, but (as his manner was to handle matters) never out of neceſſity. And ſir *Edward Poynings* (after he had continued at *Sluice* ſome good while till all things were ſettled) returned unto the king, being then before *Boloign*.

SOMEWHAT about this time came letters from *Ferdinando* and *Iſabella*, king and queen of *Spain*; ſignifying the final conqueſt of *Granada* from the *Moors*; which action in it ſelf ſo worthy, king *Ferdinando* (whoſe manner was never to loſe any virtue for the ſhewing) had expreſſed and diſplayed in his letters at large, with all the particularities and religious puncto's and ceremonies, that were obſerved in the reception of that city and kingdom: Shewing amongſt other things, that the king would not by any means in perſon enter the city, until he had firſt aloof ſeen the croſs ſet up upon the greater tower of *Granada*, whereby it became Chriſtian ground. That likewiſe before he would enter, he did homage to God above, pronouncing by an herald from the height of that tower, that he did acknowledge to have recovered that kingdom by the help of God Almighty, and the glorious Virgin, and the virtuous Apoſtle ſaint *James*, and the holy father *Innocent* the eighth, together with the aids and ſervices of his prelates, nobles, and commons. That yet he ſtirred not from his camp, till he had ſeen a little army of martyrs, to the number of ſeven hundred and more Chriſtians (that had lived in bonds and ſervitude, as ſlaves to the *Moors*) paſs before his eyes, ſinging a pſalm for their redemption; and that he had given tribute unto God, by alms and relief extended to them all, for his admiſſion

admiſſion into the city. Theſe things were in the letters, with many more ceremonies of a kind of holy oſtentation.

The king ever willing to put himſelf into the conſort or quire of all religious actions, and naturally affecting much the king of *Spain*, (as far as one king can affect another) partly for his virtues, and partly for a counterpoiſe to *France*; upon the receit of theſe letters, ſent all his nobles and prelates that were about the court, together with the mayor and aldermen of *London*, in great ſolemnity to the church of *Paul*'s; there to hear a declaration from the lord chancellor, now cardinal. When they were aſſembled, the cardinal ſtanding upon the uppermoſt ſtep, or half-pace before the quire, and all the nobles, prelates, and governours of the city at the foot of the ſtairs, made a ſpeech to them; letting them know, that they were aſſembled in that conſecrate place, to ſing unto God a new ſong. For that (ſaid he) theſe many years the Chriſtians have not gained new ground or territory upon the Infidels, nor enlarged and ſet farther the bounds of the Chriſtian world. But this is now done by the proweſs and devotion of *Ferdinando* and *Iſabella*, king and queen of *Spain*; who have (to their immortal honour) recovered the great and rich kingdom of *Granada*, and the populous and mighty city of the ſame name from the *Moors*, having been in poſſeſſion thereof by the ſpace of ſeven hundred Years and more: For which, this aſſembly and all Chriſtians are to render laud and thanks unto God, and to celebrate this noble act of the king of *Spain*; who in this is not only victorious, but apoſtolical, in the gaining of new provinces to the Chriſtian faith. And the rather, for that this victory and conqueſt is obtained without much effuſion of blood. Whereby it is to be hoped, that there ſhall be gained not only new territory, but infinite ſouls to the church of *Chriſt*, whom the Almighty (as it ſeems) would have live to be converted. Herewithal he did relate ſome of the moſt memorable particulars of the war and victory. And after his ſpeech ended, the whole aſſembly went ſolemnly in proceſſion, and *Te Deum* was ſung.

Immediately after the ſolemnity, the king kept his *May* day at his palace of *Shene*, now *Richmond*. Where, to warm the blood of his nobility and gallants againſt the war, he kept great triumphs of juſting and tourney, during all that month. In which ſpace it fell out, that ſir *James Parker*, and *Hugh Vaughan*, (one of the king's gentlemen uſhers) having had a controverſy touching certain arms that the king at arms had given *Vaughan*, were appointed to run ſome courſes one againſt another. And by accident of a faulty helmet that *Parker* had on, he was ſtricken into the mouth at the firſt courſe, ſo that his tongue was born unto the hinder part of his head, in ſuch ſort, that he died preſently upon the place. Which becauſe of the controverſy precedent, and the death that followed, was accounted amongſt the vulgar as a combat or trial of right. The king towards the end of this ſummer, having put his forces, wherewith he meant to invade *France*, in readineſs, (but ſo as they were not yet met or muſtered together) ſent *Urſwick* (now made his Almoner) and ſir *John Riſley*, to *Maximilian*, to let him know that he was in arms, ready to paſs the ſeas into *France*, and did but expect to hear from him, when and where he did appoint to join with him, according to his promiſe made unto him by *Countebalt* his embaſſador.

The *Engliſh* embaſſadors having repaired to *Maximilian*, did find his power and promiſe at a very great diſtance; he being utterly unprovided of men, money, and arms, for any ſuch enterprize. For *Maximilian* having neither

neither wing to fly on, for that his patrimony of *Auſtria* was not in his hands (his Father being then living:) and on the other ſide, his matrimonial territories of *Flanders* were partly in dowry to his mother-in-law, and partly not ſerviceable, in reſpect of the late rebellions; was thereby deſtitute of means to enter into war. The embaſſadors ſaw this well, but wiſely thought fit to advertiſe the King thereof, rather than to return themſelves, till the king's farther pleaſure were known. The rather, for that *Maximilian* himſelf ſpake as great as ever he did before, and entertained them with dilatory anſwers; ſo as the formal part of their embaſſage might well warrant and require their farther ſtay. The king hereupon (who doubted as much before, and ſaw through his buſineſs from the beginning) wrote back to the embaſſadors, commending their diſcretion in not returning, and willing them to keep the ſtate wherein they found *Maximilian* as a Secret, till they heard farther from him: and mean while went on with his voyage royal for *France*, ſuppreſſing for a time this advertiſement touching *Maximilian*'s poverty and diſability.

By this time was drawn together a great and puiſſant army into the city of *London*; in which were *Thomas* marquis *Dorſet*, *Thomas* earl of *Arundel*, *Thomas* earl of *Derby*, *George* earl of *Shrewsbury*, *Edmond* earl of *Suffolk*, *Edward* earl of *Devonſhire*, *George* earl of *Kent*, the earl of *Eſſex*, *Thomas* earl of *Ormond*, with a great number of barons, knights, and principal gentlemen; and amongſt them *Richard Thomas*, much noted for the brave troops that he brought out of *Wales*. The army riſing in the whole to the number of five and twenty thouſand foot, and ſixteen hundred horſe; over which the king (conſtant in his accuſtomed truſt and employment) made *Jaſper* duke of *Bedford*, and *John* Earl of *Oxford*, generals under his own perſon. The ninth of *September*, in the eighth Year of his reign, he departed from *Greenwich* towards the ſea; all men wondring that he took that ſeaſon (being ſo near winter) to begin the war; and ſome thereupon gathering, it was a ſign that the war would not be long. Nevertheleſs the king gave out the contrary, thus; that he intending not to make a ſummer buſineſs of it, but a reſolute war (without term prefixed) until he had recovered *France*; it ſkilled not much when he began it, eſpecially having *Calais* at his back, where he might winter, if the reaſon of the war ſo required. The ſixth of *October* he embarked at *Sandwich*; and the ſame day took land at *Calais*, which was the rendezvous, where all his forces were aſſigned to meet. But in this his journey towards the ſea-ſide, (wherein for the cauſe that we ſhall now ſpeak of, he hovered ſo much the longer) he had received letters from the lord *Cordes*, who the hotter he was againſt the *Engliſh* in time of war, had the more credit in a negociation of peace; and beſides was held a man open and of good faith. In which letters there was made an overture of peace from the *French* king, with ſuch conditions as were ſomewhat to the king's taſte; but this was carried at the firſt with wonderful ſecrecy. The king was no ſooner come to *Calais*, but the calm winds of peace began to blow. For firſt, the *Engliſh* embaſſadors returned out of *Flanders* from *Maximilian*, and certified the king, that he was not to hope for any aid from *Maximilian*, for that he was altogether unprovided. His will was good, but he lacked money. And this was made known and ſpread through the army. And although the *Engliſh* were therewithal nothing diſmayed, and that it be the manner of ſoldiers, upon bad news to ſpeak the more bravely; yet nevertheleſs it was a kind of preparative to a peace. Inſtantly in the neck of this (as the king had laid it) came news, that

that *Ferdinando* and *Iſabella*, king and queen of *Spain*, had concluded a peace with king *Charles*; and that *Charles* had reſtored unto them the counties of *Ruſſignon* and *Perpignan*, which formerly were mortgaged by *John* king of *Aragon* (*Ferdinando*'s father) unto *France*, for three hundred thouſand crowns; which debt was alſo upon this peace by *Charles* clearly releaſed. This came alſo handſomely to put on the peace; both becauſe ſo potent a confederate was fallen off, and becauſe it was a fair example of a peace bought; ſo as the king ſhould not be the ſole merchant in this peace. Upon theſe airs of peace, the king was content that the biſhop of *Exeter*, and the lord *D'Aubigny* (governour of *Calais*) ſhould give a meeting unto the lord *Cordes*, for the treaty of a peace. But himſelf nevertheleſs and his army, the fifteenth of *October*, removed from *Calais*, and in four days march ſate him down before *Boloign*.

During this ſiege of *Boloign*, (which continued near a month) there paſſed no memorable action, nor accident of war; only ſir *John Savage*, a valiant captain, was ſlain, riding about the walls of the town, to take a view. The town was both well fortified, and well manned; yet it was diſtreſſed, and ready for an aſſault. Which if it had been given, (as was thought) would have coſt much blood; but yet the town would have been carried in the end. Mean while a peace was concluded by the commiſſioners, to continue for both the kings lives. Where there was no article of importance; being in effect rather a bargain than a treaty. For all things remained as they were, ſave that there ſhould be paid to the king ſeven hundred forty five thouſand duckets in preſent, for his charges in that journey; and five and twenty thouſand crowns yearly, for his charges ſuſtained in the aids of the *Britains*. For which annual, though he had *Maximilian* bound before for thoſe charges; yet he counted the alteration of the hand, as much as the principal debt. And beſides, it was left ſomewhat indefinitely when it ſhould determine or expire; which made the *Engliſh* eſteem it as a tribute carried under fair terms. And the truth is, it was paid both to the king, and to his ſon king *Henry* the eighth, longer than it could continue upon any computation of charges. There was alſo aſſigned by the *French* king, unto all the king's principal counſellors, great penſions, beſides rich gifts for the preſent. Which whether the king did permit, to ſave his own purſe from rewards, or to communicate the envy of a buſineſs, that was diſpleaſing to his people, was diverſly interpreted. For certainly the king had no great fancy to own this peace. And therefore a little before it was concluded, he had underhand procured ſome of his beſt captains and men of war, to adviſe him to a peace under their hands, in an earneſt manner, in the nature of a ſupplication. But the truth is, this peace was welcome to both kings. To *Charles*, for that it aſſured unto him the poſſeſſion of *Britain*, and freed the enterprize of *Naples*. To *Henry*, for that it filled his coffers; and that he foreſaw at that time a ſtorm of inward troubles coming upon him, which preſently after brake forth. But it gave no leſs diſcontent to the nobility, and principal perſons of the army, who had many of them ſold or engaged their eſtates upon the hopes of the war. They ſtuck not to ſay, that the king cared not to plume his nobility and people, to feather himſelf. And ſome made themſelves merry with that the king had ſaid in parliament; that after the war was once begun, he doubted not but to make it pay it ſelf; ſaying, he had kept promiſe.

Having riſen from *Boloign*, he went to *Calais*, where he ſtayed ſome time. From whence alſo he wrote letters, (which was a courteſy that he ſometimes

ſometimes uſed) to the mayor of *London*, and the aldermen his brethren; half bragging what great ſums he had obtained for the peace; knowing well that full coffers of the king is ever good news to *London*. And better news it would have been, if their benevolence had been but a loan. And upon the ſeventeenth of *December* following he returned to *Weſtminſter*, where he kept his *Chriſtmas*.

Soon after the king's return, he ſent the order of the garter to *Alphonſo* duke of *Calabria*, eldeſt ſon to *Ferdinando* king of *Naples*. An honour ſought by that prince to hold him up in the eyes of the *Italians*; who expecting the arms of *Charles*, made great accompt of the amity of *England* for a bridle to *France*. It was received by *Alphonſo* with all the ceremony and pomp that could be deviſed, as things uſe to be carried that are intended for opinion. It was ſent by *Urſwick*; upon whom the king beſtowed this embaſſage to help him after many dry employments.

At this time the king began again to be haunted with ſprites, by the magick and curious arts of the lady *Margaret*; who raiſed up the ghoſt of *Richard* duke of *York*, ſecond ſon to king *Edward* the fourth, to walk and vex the king. This was a finer counterfeit ſtone than *Lambert Simnel*; better done, and worn upon greater hands; being graced after with the wearing of a king of *France*, and a king of *Scotland*, not of a ducheſs of *Burgundy* only. And for *Simnel*, there was not much in him, more than that he was a handſome boy, and did not ſhame his robes. But this youth (of whom we are now to ſpeak) was ſuch a mercurial, as the like hath ſeldom been known; and could make his own part, if at any time he chanced to be out. Wherefore this being one of the ſtrangeſt examples of a perſonation, that ever was in elder or later times; it deſerveth to be diſcovered, and related at the full. Although the king's manner of ſhewing things by pieces, and by dark lights, hath ſo muffled it, that it hath left it almoſt as a myſtery to this day.

The lady *Margaret*, (whom the king's friends called *Juno*, becauſe ſhe was to him as *Juno* was to *AEneas*, ſtirring both heaven and hell to do him miſchief) for a foundation of her particular practices againſt him, did continually, by all means poſſible, nouriſh, maintain and divulge the flying opinion, that *Richard* duke of *York* (ſecond ſon to *Edward* the fourth) was not murdered in the tower (as was given out) but ſaved alive. For that thoſe that were employed in that barbarous fact, having deſtroyed the elder brother, were ſtricken with remorſe and compaſſion towards the younger, and ſet him privily at liberty to ſeek his fortune. This lure ſhe caſt abroad, thinking that this fame and belief (together with the freſh example of *Lambert Simnel*) would draw at one time or other ſome birds to ſtrike upon it. She uſed likewiſe a farther diligence, not committing all to chance: For ſhe had ſome ſecret eſpials (like to the *Turks* commiſſioners for children of tribute) to look abroad for handſome and graceful youths, to make *Plantagenets*, and dukes of *York*. At the laſt ſhe did light on one, in whom all things met as one would wiſh, to ſerve her turn for a counterfeit of *Richard* duke of *York*.

This was *Perkin Warbeck*, whoſe adventures we ſhall now deſcribe. For firſt, the years agreed well. Secondly, he was a youth of fine favour and ſhape. But more than that, he had ſuch a crafty and bewitching faſhion, both to move pity, and to induce belief, as was like a kind of faſcination and inchantment to thoſe that ſaw him or heard him. Thirdly, he had been from his childhood ſuch a wanderer; or (as the king called him) ſuch

a land-loper, as it was extreme hard to hunt out his neſt and parents. Neither again could any man, by company or converſing with him, be able to ſay or detect well what he was, he did ſo flit from place to place. Laſtly, there was a circumſtance (which is mentioned by one that wrote in the ſame time) that is very likely to have made ſomewhat to the matter; which is, that king *Edward* the fourth was his godfather. Which, as it is ſomewhat ſuſpicious, for a wanton prince to become goſſip in ſo mean a houſe, and might make a man think, that he might indeed have in him ſome baſe blood of the houſe of *York*; ſo at the leaſt (though that were not) it might give the occaſion to the boy, in being called king *Edward*'s god-ſon, or perhaps in ſport king *Edward*'s ſon, to entertain ſuch thoughts into his head. For tutor he had none (for aught that appears) as *Lambert Simnel* had, until he came unto the lady *Margaret*, who inſtructed him.

THUS therefore it came to paſs: there was a townſ-man of *Tournay*, that had born office in that town, whoſe name was *John Osbeck*, a convert *Jew*, married to *Katharine de Faro*, whoſe buſineſs drew him to live for a time with his wife at *London*, in king *Edward* the fourth's days. During which time he had a ſon by her, and being known in court, the king either out of a religious nobleneſs, becauſe he was a convert, or upon ſome private acquaintance, did him the honour as to be godfather to his child, and named him *Peter*. But afterwards, proving a dainty and effeminate youth; he was commonly called by the diminutive of his name, *Peter-kin*, or *Perkin*. For as for the name of *Warbeck*, it was given him when they did but gueſs at it, before examinations had been taken. But yet he had been ſo much talked on by that name, as it ſtuck by him after his true name of *Osbeck* was known. While he was a young child, his parents returned with him to *Tournay*. Then was he placed in a houſe of a kinſman of his, called *John Stanbeck*, at *Antwerp*, and ſo roved up and down between *Antwerp* and *Tournay*, and other towns of *Flanders*, for a good time; living much in *Engliſh* company, and having the *Engliſh* tongue perfect. In which time, being grown a comely youth, he was brought by ſome of the eſpials of the lady *Margaret*, into her preſence. Who viewing him well, and ſeeing that he had a face and perſonage that would bear a noble fortune; and finding him otherwiſe of a fine ſpirit, and winning behaviour; thought ſhe had now found a curious piece of marble, to carve out an image of a duke of *York*. She kept him by her a great while, but with extream ſecrecy. The while ſhe inſtructed him by many cabinet conferences. Firſt, in princely behaviour and geſture; teaching him how he ſhould keep ſtate, and yet with a modeſt ſenſe of his misfortunes. Then ſhe informed him of all the circumſtances and particulars that concerned the perſon of *Richard* duke of *York*, which he was to act: deſcribing unto him the perſonages, lineaments, and features of the king and queen his pretended parents; and of his brother, and ſiſters, and divers others, that were neareſt him in his childhood; together with all paſſages, ſome ſecret, ſome common, that were fit for a child's memory, until the death of king *Edward*. Then ſhe added the particulars of the time from the king's death, until he and his brother were committed to the tower, as well during the time he was abroad, as while he was in ſanctuary. As for the times while he was in the tower, and the manner of his brother's death, and his own eſcape; ſhe knew they were things that a very few could controll. And therefore ſhe taught him only to tell a ſmooth and likely tale of thoſe matters; warning him not to vary from it. It was agreed likewiſe between

them, what account he ſhould give of his peregrination abroad, intermixing many things which were true, and ſuch as they knew others could teſtify, for the credit of the reſt; but ſtill making them to hang together with the part he was to play. She taught him likewiſe how to avoid ſundry captious and tempting queſtions, which were like to be aſked of him. But in this ſhe found him of himſelf ſo nimble and ſhifting, as ſhe truſted much to his own wit and readineſs; and therefore laboured the leſs in it. Laſtly, ſhe raiſed his thoughts with ſome preſent rewards, and farther promiſes; ſetting before him chiefly the glory and fortune of a crown, if things went well, and a ſure refuge to her court, if the worſt ſhould fall. After ſuch time as ſhe thought he was perfect in his leſſon, ſhe began to caſt with her ſelf from what coaſt this blazing ſtar ſhould firſt appear, and at what time it muſt be upon the horizon or *Ireland*; for there had the like meteor ſtrong influence before. The time of the apparition to be, when the king ſhould be engaged into a war with *France*. But well ſhe knew, that whatſoever ſhould come from her, would be held ſuſpected. And therefore, if he ſhould go out of *Flanders* immediately into *Ireland*, ſhe might be thought to have ſome hand in it. And beſides, the time was not yet ripe; for that the two kings were then upon terms of peace. Therefore ſhe wheel'd about; and to put all ſuſpicion afar off, and loth to keep him any longer by her, (for that ſhe knew ſecrets are not long-liv'd) ſhe ſent him unknown into *Portugal*, with the lady *Brampton*, an *Engliſh* lady, that embarked for *Portugal* at that time; with ſome *Privado* of her own, to have an eye upon him, and there he was to remain, and to expect her farther directions. In the mean time, ſhe omitted not to prepare things for his better welcome and accepting, not only in the kingdom of *Ireland*, but in the court of *France*. He continued in *Portugal* about a year; and by that time the king of *England* called his parliament, (as hath been ſaid) and had declared open war againſt *France*. Now did the ſign reign, and the conſtellation was come, under which *Perkin* ſhould appear. And therefore he was ſtraight ſent unto by the ducheſs to go for *Ireland*, according to the firſt deſignment. In *Ireland* he did arrive at the town of *Cork*. When he was thither come, his own tale was, (when he made his confeſſion afterwards) that the *Iriſhmen* finding him in ſome good clothes, came flocking about him, and bare him down that he was the duke of *Clarence* that had been there before. And after, that he was *Richard* the third's baſe ſon. And laſtly, that he was *Richard* duke of *York*, ſecond ſon to *Edward* the fourth. But that he (for his part) renounced all theſe things, and offered to ſwear upon the holy Evangeliſts, that he was no ſuch man; till at laſt they forced it upon him, and bad him fear nothing, and ſo forth. But the truth is, that immediately upon his coming into *Ireland*, he took upon him the ſaid perſon of the duke of *York*, and drew unto him accomplices and partakers, by all the means he could deviſe. Inſomuch as he wrote his letters unto the earls of *Deſmond* and *Kildare*, to come in to his aid, and be of his party; the originals of which letters are yet extant.

SOMEWHAT before this time, the ducheſs had alſo gained unto her a near ſervant of king *Henry*'s own, one *Stephen Frion*, his ſecretary for the *French* tongue; an active man, but turbulent and diſcontented. This *Frion* had fled over to *Charles* the *French* king, and put himſelf into his ſervice, at ſuch time as he began to be in open enmity with the king. Now king *Charles*, when he underſtood of the perſon and attempts of *Perkin*, (ready of himſelf to embrace all advantages againſt the king of *England*, inſti-

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gated by *Frion*, and formerly prepared by the Lady *Margaret)* forthwith diſpatched one *Lucas*, and this *Frion*, in the nature of embaſſadors, to *Perkin*; to advertiſe him of the king's good inclination to him, and that he was reſolved to aid him, to recover his right againſt King *Henry*, an uſurper of *England*, and an enemy of *France*; and wiſhed him to come over unto him at *Paris*. *Perkin* thought himſelf in heaven, now that he was invited by ſo great a king in ſo honourable a manner. And imparting unto his friends in *Ireland* for their encouragement, how fortune called him, and what great hopes he had, ſailed preſently into *France*. When he was come to the court of *France*, the king received him with great honour; ſaluted, and ſtyled him by the name of the duke of *York*; lodged him, and accommodated him in great ſtate. And the better to give him the repreſentation and the countenance of a prince, aſſigned him a guard for his perſon, whereof the lord *Congreſall* was captain. The courtiers likewiſe (though it be ill mocking with the *French)* applied themſelves to their king's bent, ſeeing there was reaſon of ſtate for it. At the ſame time there repaired unto *Perkin*, divers *Engliſhmen* of quality; ſir *George Nevile*, ſir *John Taylor*, and about one hundred more; and amongſt the reſt, this *Stephen Frion*, of whom we ſpake, who followed his fortune both then and for a long time after, and was indeed his principal counſellor and inſtrument in all his proceedings. But all this on the *French* king's part was but a trick, the better to bow king *Henry* to peace. And therefore upon the firſt grain of incenſe, that was ſacrificed upon the altar of peace at *Boloign*, *Perkin* was ſmoaked away. Yet would not the *French* king deliver him up to king *Henry*, (as he was laboured to do) for his honour's ſake, but warned him away, and diſmiſſed him. And *Perkin* on his part was as ready to be gone, doubting he might be caught up under hand. He therefore took his way into *Flanders*, unto the ducheſs of *Burgundy*; pretending that having been variouſly toſſed by fortune, he directed his courſe thither as to a ſafe harbour: no ways taking knowledge that he had ever been there before, but as if that had been his firſt addreſs. The ducheſs on the other part, made it as new and ſtrange to ſee him; pretending (at the firſt) that ſhe was taught and made wiſe by the example of *Lambert Simnel*, how ſhe did admit of any counterfeit ſtuff; though even in that (ſhe ſaid) ſhe was not fully ſatisfied. She pretended at the firſt (and that was ever in the preſence of others) to poſe him and ſift him, thereby to try whether he were indeed the very duke of *York*, or no. But ſeeming to receive full ſatisfaction by his anſwers, ſhe then feigned her ſelf to be tranſported with a kind of aſtoniſhment, mixt of joy and wonder, at his miraculous deliverance; receiving him as if he were riſen from death to life: and inferring, that God, who had in ſuch wonderful manner preſerved him from death, did likewiſe reſerve him for ſome great and proſperous fortune. As for his diſmiſſion out of *France*, they interpreted it not, as if he were detected or neglected for a counterfeit deceiver; but contrariwiſe that it did ſhew manifeſtly unto the world, that he was ſome great matter; for that it was his abandoning that (in effect) made the peace; being no more but the ſacrificing of a poor diſtreſſed prince, unto the utility and ambition of two mighty monarchs. Neither was *Perkin* for his part wanting to himſelf, either in gracious and princely behaviour, or in ready and appoſite anſwers, or in contenting and careſſing thoſe that did apply themſelves unto him, or in pretty ſcorn and diſdain to thoſe that ſeemed to doubt of him; but in all things did notably acquit himſelf; inſomuch as it was generally

believed, (as well amongſt great perſons, as amongſt the vulgar) that he was indeed duke *Richard*. Nay, himſelf, with long and continual counterfeiting, and with oft telling a lye, was turned by habit almoſt into the thing he ſeemed to be; and from a lyar, to a believer. The ducheſs therefore (as in a caſe out of doubt) did him all princely honour, calling him always by the name of her nephew, and giving him the delicate title of the white roſe of *England*; and appointed him a guard of thirty perſons, halberdiers, clad in a party-coloured livery of murrey and blue, to attend his perſon. Her court likewiſe, and generally the *Dutch* and ſtrangers, in their uſage towards him, expreſſed no leſs reſpect.

THE news hereof came blazing and thundering over into *England*, that the duke of *York* was ſure alive. As for the name of *Perkin Warbeck*, it was not at that time come to light, but all the news ran upon the duke of *York*; that he had been entertained in *Ireland*, bought and ſold in *France*, and was now plainly avowed, and in great honour in *Flanders*. Theſe fames took hold of divers; in ſome upon diſcontent; in ſome upon ambition; in ſome upon levity and deſire of change; and in ſome few upon conſcience and belief, but in moſt upon ſimplicity; and in divers, out of dependence upon ſome of the better ſort, who did in ſecret favour and nouriſh theſe bruits. And it was long e'er theſe rumours of novelty had begotten others of ſcandal and murmur againſt the king, and his government; taxing him for a great taxer of his People, and diſcountenancer of his nobility. The loſs of *Britain*, and the peace with *France*, were not forgotten. But chiefly they fell upon the wrong that he did his queen, in that he did not reign in her right. Wherefore they ſaid, that God had now brought to light a maſculine branch of the houſe of *York*, that would not be at his courteſy, howſoever he did depreſs his poor lady. And yet (as it fareth in things which are current with the multitude, and which they affect) theſe fames grew ſo general, as the authors were loſt in the generality of ſpeakers. They being like running weeds, that have no certain root; or like footings up and down, impoſſible to be traced: but after a while theſe ill humours drew to an head, and ſettled ſecretly in ſome eminent perſons; which were ſir *William Stanley* lord chamberlain of the king's houſhold, the lord *Fitzwalter*, ſir *Simon Mountfort*, ſir *Thomas Thwaites*: theſe enter'd into a ſecret conſpiracy to favour duke *Richard*'s title. Nevertheleſs none engaged their fortunes in this buſineſs openly, but two; ſir *Robert Clifford*, and maſter *William Barley*, who ſailed over into *Flanders*, ſent indeed from the party of the conſpirators here, to underſtand the truth of thoſe things that paſſed there, and not without ſome help of monies from hence; proviſionally to be delivered, if they found and were ſatisfied, that there was truth in theſe pretences. The perſon of ſir *Robert Clifford* (being a gentleman of fame and family) was extremely welcome to the lady *Margaret*. Who after ſhe had conference with him, brought him to the ſight of *Perkin*, with whom he had often ſpeech and diſcourſe. So that in the end, won either by the ducheſs to affect, or by *Perkin* to believe, he wrote back into *England*, that he knew the perſon of *Richard* duke of *York*, as well as he knew his own; and that this young man was undoubtedly he. By this means all things grew prepared to revolt and ſedition here, and the conſpiracy came to have a correſpondence between *Flanders* and *England*.

THE king on his part was not aſleep; but to arm or levy forces yet, he thought would but ſhew fear, and do this idol too much worſhip. Nevertheleſs the ports he did ſhut up, or at leaſt kept a watch on them, that none ſhould

ſhould paſs to or fro that was ſuſpected: but for the reſt, he choſe to work by countermine. His purpoſes were two; the one, to lay open the abuſe; the other, to break the knot of the conſpirators. To detect the abuſe, there were but two ways; the firſt, to make it manifeſt to the world that the duke of *York* was indeed murthered; the other, to prove that were he dead or alive, yet *Perkin* was a counterfeit. For the firſt, thus it ſtood. There were but four perſons that could ſpeak upon knowledge, to the murther of the duke of *York*; ſir *James Tirrel* (the employed man from king *Richard*) *John Dighton*, and *Miles Forreſt* his ſervants (the two butchers or tormentors) and the prieſt of the tower that buried them. Of which four, *Miles Forreſt* and the prieſt were dead, and there remained alive only ſir *James Tirrel* and *John Dighton*. Theſe two the king cauſed to be committed to the tower, and examined touching the manner of the death of the two innocent princes. They agreed both in a tale, (as the king gave out) to this effect: that king *Richard* having directed his warrant for the putting of them to death, to *Brackenbury* the lieutenant of the tower, was by him refuſed. Whereupon the king directed his warrant to ſir *James Tirrel*, to receive the keys of the tower from the lieutenant (for the ſpace of a night) for the king's ſpecial ſervice. That ſir *James Tirrel* accordingly repaired to the tower by night, attended by his two ſervants aforenamed, whom he had choſen for that purpoſe. That himſelf ſtood at the ſtair-foot, and ſent theſe two villains to execute the murther. That they ſmothered them in their bed; and that done, called up their maſter to ſee their naked dead bodies, which they had laid forth. That they were buried under the ſtairs, and ſome ſtones caſt upon them. That when the report was made to king *Richard*, that his will was done, he gave ſir *James Tirrel* great thanks, but took exception to the place of their burial, being too baſe for them that were king's children. Whereupon another night, by the king's warrant renewed, their bodies were removed by the prieſt of the tower, and buried by him in ſome place, which (by means of the prieſt's death ſoon after) could not be known. Thus much was then delivered abroad, to be the effect of thoſe examinations: but the king, nevertheleſs, made no uſe of them in any of his declarations; whereby (as it ſeems) thoſe examinations left the buſineſs ſomewhat perplexed. And as for ſir *James Tirrel*, he was ſoon after beheaded in the tower yard, for other matters of treaſon. But *John Dighton* (who it ſeemeth ſpake beſt for the king) was forthwith ſet at liberty, and was the principal means of divulging this tradition. Therefore this kind of proof being left ſo naked, the king uſed the more diligence in the latter, for the tracing of *Perkin*. To this purpoſe he ſent abroad into ſeveral parts, and eſpecially into *Flanders*, divers ſecret and nimble ſcouts and ſpies, ſome feigning themſelves to fly over unto *Perkin*, and to adhere unto him; and ſome under other pretences, to learn, ſearch, and diſcover all the circumſtances and particulars of *Perkin*'s parents, birth, perſon, travels up and down; and in brief, to have a journal (as it were) of his life and doings. He furniſhed theſe his employed men liberally with money, to draw on and reward intelligences; giving them alſo in charge, to advertiſe continually what they found, and nevertheleſs ſtill to go on. And ever as one advertiſement and diſcovery called up another, he employed other new men, where the buſineſs did require it. Others he employed in a more eſpecial nature and truſt, to be his pioneers in the main countermine. Theſe were directed to inſinuate themſelves into the familiarity and confidence of the principal perſons of the party in *Flanders*, and ſo to learn what

what aſſociates they had, and correſpondents, either here in *England*, or abroad; and how far every one engaged, and what new ones they meant afterwards to try or board. And as this for the perſons, ſo for the actions themſelves, to diſcover to the bottom (as they could) the utmoſt of *Perkin*'s and the conſpirators, their intentions, hopes, and practices. Theſe latter beſt-be-truſt ſpies had ſome of them farther inſtructions, to practiſe and draw off the beſt friends and ſervants of *Perkin*, by making remonſtrance to them, how weakly his enterprize and hopes were built, and with how prudent and potent a king they had to deal; and to reconcile them to the king, with promiſe of pardon and good conditions of reward. And (above the reſt) to aſſail, ſap, and work into the conſtancy of ſir *Robert Clifford*; and to win him (if they could) being the man that knew moſt of their ſecrets, and who being won away, would moſt appall and diſcourage the reſt, and in a manner break the knot.

THERE is a ſtrange tradition; that the king being loſt in a wood of ſuſpicions, and not knowing whom to truſt, had both intelligence with the confeſſors and chaplains of divers great men; and for the better credit of his eſpials abroad with the contrary ſide, did uſe to have them curſed at *Paul*'s, (by name) amongſt the bead-roll of the king's enemies, according to the cuſtom of thoſe times. Theſe eſpials plied their charge ſo roundly, as the king had an anatomy of *Perkin* alive; and was likewiſe well informed of the particular correſpondent conſpirators in *England*, and many other myſteries were revealed; and ſir *Robert Clifford* in eſpecial won to be aſſured to the king, and induſtrious and officious for his ſervice. The king therefore (receiving a rich return of his diligence, and great ſatisfaction touching a number of particulars) firſt divulged and ſpread abroad the impoſture and juggling of *Perkin*'s perſon and travels, with the circumſtances thereof, throughout the realm: not by proclamation, (becauſe things were yet in examination, and ſo might receive the more or the leſs) but by court-fames, which commonly print better than printed proclamations. Then he thought it alſo time to ſend an embaſſage unto arch-duke *Philip* into *Flanders*, for the abandoning and diſmiſſing of *Perkin*. Herein he employed ſir *Edward Poynings*, and ſir *William Warham*, doctor of the canon law. The arch-duke was then young, and governed by his council: before whom the embaſſadors had audience; and doctor *Warham* ſpake in this manner:

MY lords, the king our maſter is very ſorry, that *England* and your countrey here of *Flanders*, having been counted as man and wife for ſo long time; now this countrey of all others ſhould be the ſtage, where a baſe counterfeit ſhould play the part of a king of *England*; not only to his grace's diſquiet and diſhonour, but to the ſcorn and reproach of all ſovereign princes. To counterfeit the dead image of a king in his coin, is an high offence by all laws; but to counterfeit the living image of a king in his perſon, exceedeth all falſifications, except it ſhould be that of a *Mahomet*, or an *Antichriſt*, that counterfeit divine honour. The king hath too great an opinion of this ſage council, to think that any of you is caught with this fable, (though way may be given by you to the paſſion of ſome) the thing in it ſelf is ſo improbable. To ſet teſtimonies aſide of the death of duke *Richard*, which the king hath upon record, plain and infallible, (becauſe they may be thought to be in the king's own power) let the thing teſtify for it ſelf. Senſe and reaſon no power can command. Is it poſſible (trow

(trow you) that king *Richard* ſhould damn his ſoul, and foul his name with ſo abominable a murder, and yet not mend his caſe? Or do you think, that men of blood (that were his inſtruments) did turn to pity in the midſt of their execution? Whereas in cruel and ſavage beaſts, and men alſo, the firſt draught of blood doth yet make them more fierce and enraged. Do you not know, that the bloody executioners of tyrants, do go to ſuch errands with an halter about their neck; ſo that if they perform not, they are ſure to die for it? And do you think that theſe men would hazard their own lives, for ſparing another's? Admit they ſhould have ſaved him; what ſhould they have done with him? Turn him into *London* ſtreets, that the watchmen, or any paſſenger that ſhould light upon him, might carry him before a juſtice, and ſo all come to light? Or ſhould they have kept him by them ſecretly? That ſurely would have required a great deal of care, charge, and continual fears. But (my lords) I labour too much in a clear buſineſs. The king is ſo wiſe, and hath ſo good friends abroad, as now he knoweth duke *Perkin* from his cradle. And becauſe he is a great prince, if you have any good poet here, he can help him with notes to write his life; and to parallel him with *Lambert Simnel*, now the king's falconer. And therefore (to ſpeak plainly to your lordſhips) it is the ſtrangeſt thing in the world, that the lady *Margaret*, (excuſe us if we name her, whoſe malice to the king is both cauſeleſs and endleſs) ſhould now when ſhe is old, at the time when other women give over child-bearing, bring forth two ſuch monſters; being not the births of nine or ten months, but of many years. And whereas other natural mothers bring forth children weak, and not able to help themſelves; ſhe bringeth forth tall ſtriplings, able ſoon after their coming into the world to bid battel to mighty kings. My lords, we ſtay unwillingly upon this part. We would to God, that lady would once taſte the joys which God Almighty doth ſerve up unto her, in beholding her niece to reign in ſuch honour, and with ſo much royal iſſue, which ſhe might be pleaſed to account as her own. The king's requeſt unto the arch-duke, and your lordſhips, might be; that according to the example of king *Charles*, who hath already diſcarded him, you would baniſh this unworthy fellow out of your dominions. But becauſe the king may juſtly expect more from an ancient confederate, than from a new reconciled enemy; he maketh his requeſt unto you to deliver him up into his hands: Pirates and impoſtors of this ſort, being fit to be accounted the common enemies of mankind, and no ways to be protected by the law of nations.

After ſome time of deliberation, the embaſſadors received this ſhort anſwer:

That the arch-duke, for the love of king *Henry*, would in no ſort aid or aſſiſt the pretended duke, but in all things conſerve the amity he had with the king: But for the ducheſs dowager, ſhe was abſolute in the lands of her dowry, and that he could not lett her to diſpoſe of her own.

The king, upon the return of the embaſſadors, was nothing ſatisfied with this anſwer. For well he knew, that a patrimonial dowry carried no part of ſovereignty, or command of forces. Beſides, the embaſſadors told him plainly, that they ſaw the ducheſs had a great party in the arch-duke's counſel; and that howſoever it was carried in a courſe of connivance, yet the arch-duke underhand gave aid and furtherance to *Perkin*. Wherefore (partly

(partly out of courage, and partly out of policy) the king forthwith baniſhed all *Flemings* (as well their perſons as their wares) out of his kingdom; commanding his ſubjects likewiſe (and by name his merchants adventurers) which had a reſidence in *Antwerp*, to return; tranſlating the mart (which commonly followed the *Engliſh* cloth) unto *Calais*; and embarred alſo all farther trade for the future. This the king did, being ſenſible in point of honour, not to ſuffer a pretender to the crown of *England*, to affront him ſo near at hand, and he to keep terms of friendſhip with the countrey where he did ſet up. But he had alſo a farther reach: for that he knew well, that the ſubjects of *Flanders* drew ſo great commodity from the trade of *England*, as by this embargo they would ſoon wax weary of *Perkin*; and that the tumults of *Flanders* had been ſo late and freſh, as it was no time for the prince to diſpleaſe the people. Nevertheleſs for form's ſake, by way of requital, the arch-duke did likewiſe baniſh the *Engliſh* out of *Flanders*; which in effect was done to his hand.

The king being well advertiſed, that *Perkin* did more truſt upon friends and partakers within the realm, than upon foreign arms, thought it behoved him to apply the remedy where the diſeaſe lay; and to proceed with ſeverity againſt ſome of the principal conſpirators here within the realm; thereby to purge the ill humours in *England*, and to cool the hopes in *Flanders*. Wherefore he cauſed to be apprehended (almoſt at an inſtant) *John Ratcliffe* lord *Fitz-walter*, ſir *Simon Mountfort*, ſir *Thomas Thwaites*, *William D'Aubigney*, *Robert Ratcliffe*, *Thomas Creſſenor*, and *Thomas Aſtwood*. All theſe were arraigned, convicted, and condemned for high-treaſon, in adhering and promiſing aid to *Perkin*. Of theſe the lord *Fitz-walter* was conveyed to *Calais*, and there kept in hold, and in hope of life, until ſoon after (either impatient or betrayed) he dealt with his keeper to have eſcaped, and thereupon was beheaded. But ſir *Simon Mountfort*, *Robert Ratcliffe*, and *William D'Aubigney*, were beheaded immediately after their condemnation. The reſt were pardoned, together with many others, clerks and laicks, amongſt which were two *Dominican* friars, and *William Worſeley* dean of *Paul's*; which latter ſort paſſed examination, but came not to publick trial.

The lord chamberlain at that time was not touched; whether it were that the king would not ſtir too many humours at once, but (after the manner of good phyſicians) purge the head laſt; or that *Clifford* (from whom moſt of theſe diſcoveries came) reſerved that piece for his own coming over; ſignifying only to the king in the mean time, that he doubted there were ſome greater ones in the buſineſs, whereof he would give the king farther account when he came to his preſence.

Upon *Alhallows* day even, being now the tenth year of the king's reign, the king's ſecond ſon *Henry* was created duke of *York*; and as well the duke, as divers others, noblemen, knights-batchelors, and gentlemen of quality, were made knights of the *Bath* according to the ceremony. Upon the morrow after twelfth-day, the king removed from *Weſtminſter*, (where he had kept his *Chriſtmas*) to the tower of *London*. This he did as ſoon as he had advertiſement that ſir *Robert Clifford* (in whoſe boſom or budget moſt of *Perkin*'s ſecrets were laid up) was come into *England*. And the place of the tower was choſen to that end, that if *Clifford* ſhould accuſe any of the great ones, they might without ſuſpicion, or noiſe, or ſending abroad of warrants, be preſently attached; the court and priſon being within the cincture of one wall. After a day or two, the king drew unto him a ſelected council

council, and admitted *Clifford* to his preſence; who firſt fell down at his feet, and in all humble manner craved the king's pardon; which the king then granted, though he were indeed ſecretly aſſured of his life before. Then commanded to tell his knowledge, he did amongſt many others (of himſelf, not interrogated) impeach ſir *William Stanley*, the lord chamberlain of the king's houſhold.

The king ſeemed to be much amazed at the naming of this lord, as if he had heard the news of ſome ſtrange and fearful prodigy. To hear a man that had done him ſervice of ſo high a nature, as to ſave his life, and ſet the crown upon his head; a man, that enjoyed by his favour and advancement, ſo great a fortune both in honour and riches; a man, that was tied unto him in ſo near a band of alliance, his brother having married the king's mother; and laſtly, a man, to whom he had committed the truſt of his perſon, in making him his chamberlain: That this man, no ways diſgraced, no ways diſcontent, no ways put in fear, ſhould be falſe unto him. *Clifford* was required to ſay over again and again, the particulars of his accuſation; being warned, that in a matter ſo unlikely, and that concerned ſo great a ſervant of the king's, he ſhould not in any wiſe go too far. But the king finding that he did ſadly and conſtantly, (without heſitation or varying, and with thoſe civil proteſtations that were fit) ſtand to that that he had ſaid, offering to juſtify it upon his ſoul and life; he cauſed him to be removed. And after he had not a little bemoaned himſelf unto his council there preſent, gave order that ſir *William Stanley* ſhould be reſtrained in his own chamber where he lay before, in the ſquare tower: And the next day he was examined by the lords. Upon his examination he denied little of that wherewith he was charged, nor endeavoured much to excuſe or extenuate his fault: So that (not very wiſely) thinking to make his offence leſs by confeſſion, he made it enough for condemnation. It was conceived, that he truſted much to his former merits, and the intereſt that his brother had in the king. But thoſe helps were over-weighed by divers things that made againſt him, and were predominant in the king's nature and mind. Firſt, an over-merit; for convenient merit, unto which reward may eaſily reach, doth beſt with kings. Next, the ſenſe of his power; for the king thought, that he that could ſet him up, was the more dangerous to pull him down. Thirdly, the glimmering of a confiſcation; for he was the richeſt ſubject for value in the kingdom: there being found in his caſtle of *Holt* forty thouſand marks in ready money, and plate, beſides jewels, houſhold ſtuff, ſtocks upon his grounds, and other perſonal eſtate, exceeding great. And for his revenue in land and fee, it was three thouſand pounds a year of old rent, a great matter in thoſe times. Laſtly, the nature of the time; for if the king had been out of fear of his own eſtate, it was not unlike he would have ſpared his life. But the cloud of ſo great a rebellion hanging over his head, made him work ſure. Wherefore after ſome ſix weeks diſtance of time, which the king did honourably interpoſe, both to give ſpace to his brother's interceſſion, and to ſhew to the world that he had a conflict with himſelf what he ſhould do; he was arraigned of high-treaſon, and condemned, and preſently after beheaded.

Yet is it to this day left but in dark memory, both what the caſe of this noble perſon was, for which he ſuffered; and what likewiſe was the ground and cauſe of his defection, and the alienation of his heart from the king. His caſe was ſaid to be this; that in diſcourſe between ſir *Robert Clifford* and him, he had ſaid, that if he were ſure that that young man were

king *Edward*'s ſon, he would never bear arms againſt him. This caſe ſeems ſomewhat an hard caſe, both in reſpect of the conditional, and in reſpect of the other words. But for the conditional, it ſeemeth the judges of that time (who were learned men, and the three chief of them of the privy council) thought it was a dangerous thing to admit *ifs* and *ands*, to qualify words of treaſon; whereby every man might expreſs his malice, and blanch his danger. And it was like to the caſe (in the following times) of *Elizabeth Barton*, the holy maid of *Kent*; who had ſaid, that if king *Henry* the eighth did not take *Katharine* his wife again, he ſhould be deprived of his crown, and die the death of a dog. And infinite caſes may be put of like nature; which (it ſeemeth) the grave judges taking into conſideration, would not admit of treaſons upon condition. And as for the poſitive words, that he would not bear arms againſt king *Edward*'s ſon; though the words ſeem calm, yet it was a plain and direct over-ruling of the king's title, either by the line of *Lancaſter*, or by act of parliament: Which (no doubt) pierced the king more, than if *Stanley* had charged his lance upon him in the field. For if *Stanley* would hold that opinion, that a ſon of king *Edward* had ſtill the better right, he being ſo principal a perſon of authority and favour about the king, it was to teach all *England* to ſay as much. And therefore (as thoſe times were) that ſpeech touched the quick. But ſome writers do put this out of doubt; for they ſay, that *Stanley* did expreſsly promiſe to aid *Perkin*, and ſent him ſome help of treaſure.

Now for the motive of his falling off from the king; it is true, that at *Boſworth* field the king was beſet, and in a manner incloſed round about by the troops of king *Richard*, and in manifeſt danger of his life; when this *Stanley* was ſent by his brother, with three thouſand men to his reſcue, which he performed ſo, that king *Richard* was ſlain upon the place. So as the condition of mortal men is not capable of a greater benefit, than the king received by the hands of *Stanley*; being like the benefit of *Chriſt*, at once to ſave and crown. For which ſervice the king gave him great gifts, made him his counſellor and chamberlain; and (ſomewhat contrary to his nature) had winked at the great ſpoils of *Boſworth* field, which came almoſt wholly to this man's hands, to his infinite enriching. Yet nevertheleſs blown up with the conceit of his merit, he did not think he had received good meaſure from the king, at leaſt not preſſing down, and running over, as he expected. And his ambition was ſo exorbitant and unbounded, as he became ſuitor to the king for the earldom of *Cheſter*: which ever being a kind of appennage to the principality of *Wales*, and uſing to go to the king's ſon, his ſuit did not only end in a denial, but in a diſtaſte: The king perceiving thereby, that his deſires were intemperate, and his cogitations vaſt and irregular, and that his former benefits were but cheap, and lightly regarded by him. Wherefore the king began not to brook him well. And as a little leaven of new diſtaſte, doth commonly ſour the whole lump of former merits; the king's wit began now to ſuggeſt unto his paſſion, that *Stanley* at *Boſworth* field, though he came time enough to ſave his life, yet he ſtayed long enough to endanger it. But yet having no matter againſt him, he continued him in his places until this his fall.

After him was made lord chamberlain, *Giles* lord *D'Aubigny*, a man of great ſufficiency and valour; the more becauſe he was gentle and moderate.

There was a common opinion, that ſir *Robert Clifford* (who now was become the ſtate informer) was from the beginning an emiſſary and ſpy of the

the king's; and that he fled over into *Flanders* with his conſent and privity. But this is not probable; both becauſe he never recovered that degree of grace, which he had with the king before his going over; and chiefly, for that the diſcovery which he had made touching the lord chamberlain, (which was his great ſervice) grew not from any thing he learn'd abroad, for that he knew it well before he went.

THESE executions (and eſpecially that of the lord chamberlain's, which was the chief ſtrength of the party, and by means of ſir *Robert Clifford*, who was the moſt inward man of truſt amongſt them) did extremely quail the deſign of *Perkin*, and his complices, as well through diſcouragement as diſtruſt. So that they were now (like ſand without lime) ill bound together; eſpecially as many as were *Engliſh*, who were at a gaze, looking ſtrange one upon another, not knowing who was faithful to their ſide; but thinking, that the king (what with his baits, and what with his nets) would draw them all unto him that were any thing worth. And indeed it came to paſs, that divers came away by the thread, ſometimes one, and ſometimes another. *Barley* (that was joint commiſſioner with *Clifford)* did hold out one of the longeſt, till *Perkin* was far won; yet made his peace at the length. But the fall of this great man, being in ſo high authority and favour (as was thought) with the king; and the manner of carriage of the buſineſs, as if there had been ſecret inquiſition upon him for a great time before; and the cauſe for which he ſuffered, which was little more than for ſaying in effect, that the title of *York* was better than the title of *Lancaſter*; which was the caſe almoſt of every man (at the leaſt in opinion;) was matter of great terror amongſt all the king's ſervants and ſubjects; inſomuch as no man almoſt thought himſelf ſecure, and men durſt ſcarce commune or talk one with another, but there was a general diffidence every where: Which nevertheleſs made the king rather more abſolute, than more ſafe. For bleeding inwards, and ſhut vapours, ſtrangle ſooneſt, and oppreſs moſt.

HEREUPON preſently came forth ſwarms and vollies of libels, (which are the guſts of liberty of ſpeech reſtrained, and the females of ſedition) containing bitter invectives and ſlanders againſt the king, and ſome of the council: For the contriving and diſperſing whereof (after great diligence of enquiry) five mean perſons were caught up and executed.

MEAN while the king did not neglect *Ireland*, being the ſoil where theſe muſhrooms and upſtart weeds (that ſpring up in a night) did chiefly proſper. He ſent therefore from hence (for the better ſettling of his affairs there) commiſſioners of both robes, the prior of *Lanthony*, to be his chancellor in that kingdom; and ſir *Edward Poynings*, with a power of men, and a martial commiſſion, together with a civil power of his lieutenant, with a clauſe, that the earl of *Kildare*, then deputy, ſhould obey him. But the wild *Iriſh* (who were the principal offenders) fled into the woods and bogs, after their manner; and thoſe that knew themſelves guilty in the pale fled to them. So that ſir *Edward Poynings* was enforced to make a wild chaſe upon the wild *Iriſh:* Where (in reſpect of the mountains and faſtneſſes) he did little good. Which (either out of a ſuſpicious melancholy upon his bad ſucceſs, or the better to ſave his ſervice from diſgrace) he would needs impute unto the comfort that the rebels ſhould receive underhand from the earl of *Kildare*; every light ſuſpicion growing upon the earl, in reſpect of the *Kildare* that was in the action of *Lambert Simnel*, and ſlain at *Stokefield*. Wherefore he cauſed the earl to be apprehended, and

ſent into *England*; where, upon examination, he cleared himſelf ſo well, as he was replaced in his government. But *Poynings* (the better to make compenſation of the meagerneſs of his ſervice in the wars by acts of peace) called a parliament; where was made that memorable act, which at this day is called *Poyning*'s law, whereby all the ſtatutes of *England* were made to be of force in *Ireland*: For before they were not, neither are any now in force in *Ireland*, which were made in *England* ſince that time; which was the tenth year of the king.

About this time began to be diſcovered in the king that diſpoſition, which afterward nouriſhed and whet on by bad counſellors and miniſters, proved the blot of his times; which was the courſe he took to cruſh treaſure out of his ſubjects purſes, by forfeitures upon penal laws. At this men did ſtartle the more at this time, becauſe it appeared plainly to be in the king's nature, and not out of his neceſſity, he being now in float for treaſure: For that he had newly received the peace-money from *France*, the benevolence-money from his ſubjects, and great caſualties upon the confiſcations of the lord chamberlain, and divers others. The firſt noted caſe of this kind, was that of ſir *William Capel*, alderman of *London*; who upon ſundry penal laws, was condemned in the ſum of ſeven and twenty hundred pounds, and compounned with the king for ſixteen hundred: And yet after, *Empſon* would have cut another chop out of him, if the king had not died in the inſtant.

The ſummer following, the king, to comfort his mother, (whom he did always tenderly love and revere) to make demonſtration to the world, that the proceedings againſt Sir *William Stanley* (which was impoſed upon him by neceſſity of ſtate) had not in any degee diminiſhed the affection he bare to *Thomas* his Brother, went in progreſs to *Latham*, to make merry with his mother and the earl, and lay there divers days.

During this progreſs, *Perkin Warbeck* finding that time and temporizing, which (whilſt his practices were covert, and wrought well in *England)* made for him; did now, when they were diſcovered and defeated, rather make againſt him, (for that when matters once go down the hill, they ſtay not without a new force) reſolved to try his adventure in ſome exploit upon *England*; hoping ſtill upon the affections of the common people towards the houſe of *York*. Which body of common people he thought was not to be practiſed upon, as perſons of quality are; but that the only practice upon their affections, was to ſet up a ſtandard in the field. The place where he ſhould make his attempt, he choſe to be the coaſt of *Kent*.

The king by this time was grown to ſuch a height of reputation for cunning and policy, that every accident and event that went well, was laid and imputed to his foreſight, as if he had ſet it before: as in this particular of *Perkin*'s deſign upon *Kent*. For the world would not believe afterwards, but the king having ſecret intelligence of *Perkin*'s intention for *Kent*, (the better to draw it on) went of purpoſe into the north afar off, laying an open ſide unto *Perkin*, to make him come to the cloſe, and ſo to trip up his heels, having made ſure in *Kent* before hand.

But ſo it was, that *Perkin* had gathered together a power of all nations, neither in number, nor in the hardineſs and courage of the perſons, contemptible, but in their nature and fortunes to be feared, as well of friends as enemies; being bankrupts, and many of them felons, and ſuch as lived by rapine. Theſe he put to ſea, and arrived upon the coaſt of *Sandwich*, and *Deal* in *Kent*, about *July*.

There

THERE he caſt anchor, and to prove the affections of the people, ſent ſome of his men to land, making great boaſts of the power that was to follow. The *Kentiſh* men perceiving, that *Perkin* was not followed by any *Engliſh* of name or account, and that his forces conſiſted but of ſtrangers born, and moſt of them baſe people and free-booters, fitter to ſpoil a coaſt, than to recover a kingdom; reſorting unto the principal gentlemen of the countrey, profeſſed their loyalty to the king, and deſired to be directed and commanded for the beſt of the king's ſervice. The gentlemen entering into conſultation, directed ſome forces in good number to ſhew themſelves upon the coaſt; and ſome of them to make ſigns to entice *Perkin*'s ſoldiers to land, as if they would join with them; and ſome others to appear from ſome other places, and to make ſemblance as if they fled from them, the better to encourage them to land. But *Perkin*, (who by playing the prince, or elſe taught by ſecretary *Frion*, had learned thus much; that people under command, do uſe to conſult, and after to march in order, and rebels contrariwiſe run upon an head together in confuſion) conſidering the delay of time, and obſerving their orderly, and not tumultuary arming, doubted the worſt. And therefore the wily youth would not ſet one foot out of his ſhip, till he might ſee things were ſure. Wherefore the king's forces perceiving, that they could draw on no more than thoſe that were formerly landed, ſet upon them and cut them in pieces, e'er they could fly back to their ſhips. In which ſkirmiſh (beſides thoſe that fled and were ſlain) there were taken about an hundred and fifty perſons. Which, for that the king thought, that to puniſh a few for example was gentleman's pay; but for raſkal-people, they were to cut off every man, eſpecially in the beginning of an enterprize; and likewiſe for that he ſaw, that *Perkin*'s forces would now conſiſt chiefly of ſuch rabble and ſcum of deſperate people, he therefore hanged them all for the greater terror. They were brought to *London* all rail'd in ropes, like a team of horſes in a cart, and were executed ſome of them at *London* and *Wapping*, and the reſt at divers places upon the ſea-coaſt of *Kent*, *Suſſex* and *Norfolk*, for ſea-marks, or light-houſes, to teach *Perkin*'s people to avoid the coaſt. The king being advertiſed of the landing of the rebels, thought to leave his progreſs: But being certified the next day, that they were partly defeated, and partly fled, he continued his progreſs, and ſent ſir *Richard Guildford* into *Kent* in meſſage; who calling the conntrey together, did much commend from the king their fidelity, manhood, and well handling of that ſervice; and gave them all thanks, and (in private) promiſed reward to ſome particulars.

UPON the ſixteenth of *November*, (this being the eleventh year of the king) was holden the ſerjeants feaſt at *Ely* place, there being nine ſerjeants of that call. The king to honour the feaſt, was preſent with his queen at the dinner; being a prince that was ever ready to grace and countenance the profeſſors of the law; having a little of that, that as he governed his ſubjects by his laws, ſo he governed his laws by his lawyers.

THIS year alſo the king entered into league with the *Italian* potentates for the defence of *Italy* againſt *France*. For king *Charles* had conquered the realm of *Naples*, and loſt it again, in a kind of felicity of a dream. He paſſed the whole length of *Italy* without reſiſtance; ſo that it was true which pope *Alexander* was wont to ſay, that the *Frenchmen* came into *Italy* with chalk in their hands, to mark up their lodgings, rather than with ſwords to fight. He likewiſe entered and won (in effect) the whole kingdom of *Naples* it ſelf, without ſtriking ſtroke. But preſently thereupon he did commit

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and multiply ſo many errors, as was too great a taſk for the beſt fortune to overcome. He gave no contentment to the barons of *Naples*, of the faction of the *Angeovines*; but ſcattered his rewards according to the mercenary appetites of ſome about him. He put all *Italy* upon their guard, by the ſeizing and holding of *Oſtia*, and the protecting of the liberty of *Piſa*; which made all men ſuſpect, that his purpoſes looked farther than his title of *Naples*. He fell too ſoon at difference with *Ludovico Sfortia*, who was the man that carried the keys which brought him in and ſhut him out. He neglected to extinguiſh ſome relicks of the war. And laſtly, in regard of his eaſy paſſage through *Italy* without reſiſtance, he enter'd into an overmuch deſpiſing of the arms of the *Italians*; whereby he left the realm of *Naples* at his departure ſo much the leſs provided. So that not long after his return, the whole kingdom revolted to *Ferdinando* the younger, and the *French* were quite driven out. Nevertheleſs *Charles* did make both great threats, and great preparations to re-enter *Italy* once again. Wherefore at the inſtance of divers of the ſtates of *Italy*, (and eſpecially of pope *Alexander)* there was a league concluded between the ſaid pope, *Maximilian* king of the *Romans*, *Henry* king of *England*, *Ferdinando* and *Iſabella* king and queen of *Spain*, (for ſo they are conſtantly placed in the original treaty throughout) *Auguſtino Barbadico* duke of *Venice*, and *Ludovico Sfortia* duke of *Milan*, for the common defence of their eſtates: Wherein though *Ferdinando* of *Naples* was not named as principal, yet (no doubt) the kingdom of *Naples* was tacitly included, as a fee of the church.

THERE died alſo this year *Cecile* ducheſs of *York*, mother to king *Edward* the fourth, at her caſtle of *Barkhamſted*, being of extream years, and who had lived to ſee three princes of her body crowned, and four murdered. She was buried at *Foderingham*, by her huſband.

THIS year alſo the king called his parliament, where many laws were made of a more private and vulgar nature, than ought to detain the reader of an hiſtory. And it may be juſtly ſuſpected by the proceedings following, that as the king did excel in good common-wealth laws, ſo nevertheleſs he had (in ſecret) a deſign to make uſe of them, as well for collecting of treaſure, as for correcting of manners; and ſo meaning thereby to harrow his people, did accumulate them the rather.

THE principal law that was made this parliament, was a law of a ſtrange nature; rather juſt than legal; and more magnanimous than provident. This law did ordain; that no perſon that did aſſiſt in arms, or otherwiſe, the king for the time being, ſhould after be impeached therefore, or attainted, either by the courſe of the law, or by act of parliament. But if any ſuch act of attainder did happen to be made, it ſhould be void and of none effect; for that it was agreeable to reaſon of eſtate, that the ſubject ſhould not enquire of the juſtneſs of the king's title, or quarrel; and it was agreeable to good conſcience, that (whatſoever the fortune of the war were) the ſubject ſhould not ſuffer for his obedience. The ſpirit of this law was wonderful pious and noble, being like in matter of war, unto the ſpirit of *David* in matter of plague; who ſaid, *If I have ſinned, ſtrike me*; *but what have theſe ſheep done?* Neither wanted this law parts of prudent and deep foreſight: For it did the better take away occaſion for the people to buſy themſelves to pry into the king's title; for that howſoever it fell, their ſafety was already provided for. Beſides, it could not but greatly draw unto him the love and hearts of the people, becauſe he ſeemed more careful for them than for himſelf. But yet nevertheleſs it did take off from his party

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that great tie and ſpur of neceſſity, to fight and go victors out of the field; conſidering their lives and fortunes were put in ſafety and protected, whether they ſtood to it, or ran away. But the force and obligation of this law was in it ſelf illuſory, as to the latter part of it, by a precedent act of parliament to bind or fruſtrate a future. For a ſupreme and abſolute power cannot conclude it ſelf, neither can that which is in nature revocable be made fixed, no more than if a man ſhould appoint or declare by his will, that if he made any latter will it ſhould be void. And for the caſe of the act of parliament, there is a notable precedent of it in king *Henry* the eighth's time; who doubting he might die in the minority of his ſon, procured an act to paſs, that no ſtatute made during the minority of the king, ſhould bind him or his ſucceſſors, except it were confirmed by the king under his great ſeal, at his full age. But the firſt act that paſſed in king *Edward* the ſixth's time, was an act of repeal of that former act; at which time nevertheleſs the king was *minor*. But things that do not bind, may ſatisfy for the time.

THERE was alſo made a ſhoaring or under-propping act for the benevolence; to make the ſums which any perſon had agreed to pay, and nevertheleſs were not brought in, to be leviable by courſe of law. Which act did not only bring in the arrears, but did indeed countenance the whole buſineſs, and was pretended to be made at the deſire of thoſe that had been forward to pay.

IN this parliament alſo was made that good law, which gave the attaint upon a falſe verdict between party and party, which before was a kind of evangely, and irremediable. It extends not to cauſes capital, as well becauſe they are for the moſt part at the king's ſuit; as becauſe in them (if they be followed in courſe of indictment) there paſſeth a double jury, the indictors, and the tryers; and ſo not twelve men, but four and twenty. But it ſeemeth that was not the only reaſon; for this reaſon holdeth not in the appeal. But the great reaſon was, leſt it ſhould tend to the diſcouragement of jurors in caſes of life and death; if they ſhould be ſubject to ſuit and penalty, where the favour of life maketh againſt them. It extendeth not alſo to any ſuit, where the demand is under the value of forty pounds; for that in ſuch caſes of petty value, it would not quit the charge, to go about again.

THERE was another law made againſt a branch of ingratitude in women, who having been advanced by their huſbands, or their huſbands anceſtors, ſhould alien, and thereby ſeek to defeat the heirs, or thoſe in remainder, of the lands, whereunto they had been ſo advanced. The remedy was, by giving power to the next, to enter for a forfeiture.

THERE was alſo enacted that charitable law, for the admiſſion of poor ſuitors *in forma pauperis*, without fee to counſellor, attorney or clerk, whereby poor men became rather able to vex, than unable to ſue. There were divers other good laws made that parliament, as we ſaid before: but we ſtill obſerve our manner, in ſelecting out thoſe, that are not of a vulgar nature.

THE king this while, though he ſat in parliament, as in full peace, and ſeemed to account of the deſigns of *Perkin*, (who was now returned into *Flanders*,) but as a may-game; yet having the compoſition of a wiſe king, (ſtout without, and apprehenſive within,) had given order for the watching of beacons upon the coaſts, and erecting more where they ſtood too thin, and had a careful eye where this wandering cloud would break. But *Perkin* adviſed

adviſed to keep his fire (which hitherto burned as it were upon green wood) alive with continual blowing; ſailed again into *Ireland*, whence he had formerly departed, rather upon the hopes of *France*, than upon any unreadineſs or diſcouragement he found in that people. But in the ſpace of time between, the king's diligence and *Poyning*'s commiſſion had ſo ſettled things there, as there was nothing left for *Perkin*, but the bluſtering affection of wild and naked people. Wherefore he was adviſed by his council, to ſeek aid of the king of *Scotland*, a prince young and valorous, and in good terms with his nobles and people, and ill affected to king *Henry*. At this time alſo both *Maximilian* and *Charles* of *France* began to bear no good will to the king: the one being diſpleaſed with the king's prohibition of commerce with *Flanders*; the other holding the king for ſuſpect, in regard of his late entry into league with the *Italians*. Wherefore, beſides the open aids of the ducheſs of *Burgundy*, which did with ſails and oars put on and advance *Perkin*'s deſigns, there wanted not ſome ſecret tides from *Maximilian* and *Charles*, which did further his fortunes: inſomuch as they, both by their ſecret letters and meſſages, recommended him to the king of *Scotland*.

PERKIN therefore coming into *Scotland* upon thoſe hopes, with a well-appointed company, was by the king of *Scots* (being formerly well prepared) honourably welcomed, and ſoon after his arrival admitted to his preſence, in a ſolemn manner: for the king received him in ſtate in his chamber of preſence, accompanied with divers of his nobles. And *Perkin* well attended, as well with thoſe that the king had ſent before him, as with his own train, enter'd the room where the king was, and coming near to the king, and bowing a little to embrace him, he retired ſome paces back, and with a loud voice (that all that were preſent might hear him) made his declaration in this manner:

HIGH and mighty king, your grace, and theſe your nobles here preſent, may be pleaſed benignly to bow your ears, to hear the tragedy of a young man, that by right ought to hold in his hand the ball of a kingdom; but by fortune is made himſelf a ball, toſſed from miſery to miſery, and from place to place. You ſee here before you the ſpectacle of a *Plantagenet*, who hath been carried from the nurſery to the ſanctuary; from the ſanctuary, to the direful priſon; from the priſon, to the hand of the cruel tormentor; and from that hand, to the wide wilderneſs (as I may truly call it;) for ſo the world hath been to me. So that he that is born to a great kingdom, hath not ground to ſet his foot upon, more than this where he now ſtandeth, by your princely favour. *Edward* the fourth, late king of *England*, (as your grace cannot but have heard,) left two ſons, *Edward*, and *Richard* duke of *York*, both very young. *Edward* the eldeſt ſucceeded their father in the crown, by the name of king *Edward* the fifth: but *Richard* duke of *Glouceſter*, their unnatural unkle, firſt thirſting after the kingdom, through ambition, and afterwards thriſting for their blood, out of deſire to ſecure himſelf, employed an inſtrument of his (confident to him, as he thought) to murther them both. But this man that was employed to execute that execrable tragedy, having cruelly ſlain king *Edward*, the eldeſt of the two, was moved partly by remorſe, and partly by ſome other mean, to ſave *Richard* his brother; making a report nevertheleſs to the tyrant, that he had performed his commandment for both brethren. This report was accordingly believed, and publiſhed generally: So that the world hath been

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poſſeſſed of an opinion, that they both were barbarouſly made away; tho' ever truth hath ſome ſparks that fly abroad, until it appear in due time, as this hath had. But Almighty God, that ſtopped the mouth of the lion, and ſaved little *Joaſh* from the tyranny of *Athaliah*, when ſhe maſſacred the king's children; and did ſave *Iſaac*, when the hand was ſtretched forth to ſacrifice him; preſerved the ſecond brother. For I my ſelf, that ſtand here in your preſence, am that very *Richard* duke of *York*, brother of that unfortunate prince king *Edward* the fifth, now the moſt rightful ſurviving heir male to that victorious and moſt noble *Edward* of that name the fourth, late king of *England*. For the manner of my eſcape, it is fit it ſhould paſs in ſilence, or (at leaſt) in a more ſecret relation; for that it may concern ſome alive, and the memory of ſome that are dead. Let it ſuffice to think, that I had then a mother living, a queen, and one that had expected daily ſuch a commandment from the tyrant, for the murthering of her children. Thus in my tender age eſcaping by God's mercy out of *London*, I was ſecretly conveyed over ſea: Where, after a time, the party that had me in charge (upon what new fears, change of mind, or practice, God knoweth) ſuddenly forſook me. Whereby I was forced to wander abroad, and to ſeek mean conditions for the ſuſtaining of my life. Wherefore diſtracted between ſeveral paſſions, the one of fear to be known, leſt the tyrant ſhould have a new attempt upon me; the other of grief and diſdain to be unknown, and to live in that baſe and ſervile manner that I did; I reſolved with my ſelf to expect the tyrant's death, and then to put my ſelf into my ſiſter's hands, who was next heir to the crown. But in this ſeaſon it happened one *Henry Tudor*, ſon to *Edmund Tudor* earl of *Richmond*, to come from *France* and enter into the realm, and by ſubtile and foul means to obtain the crown of the ſame, which to me rightfully appertained: So that it was but a change from tyrant to tyrant. This *Henry*, my extreme and mortal enemy, ſo ſoon as he had knowledge of my being alive, imagined and wrought all the ſubtile ways and means he could, to procure my final deſtruction: For my mortal enemy hath not only falſly ſurmiſed me to be a feigned perſon, giving me nick-names, ſo abuſing the world; but alſo, to defer and put me from entry into *England*, hath offered large ſums of money to corrupt the princes and their miniſters, with whom I have been retained; and made importune labours to certain ſervants about my perſon, to murther or poiſon me, and others to forſake and leave my righteous quarrel, and to depart from my ſervice, as ſir *Robert Clifford*, and others. So that every man of reaſon may well perceive, that *Henry*, calling himſelf king of *England*, needed not to have beſtowed ſuch great ſums of treaſure, nor ſo to have buſied himſelf with importune and inceſſant labour and induſtry, to compaſs my death and ruin, if I had been ſuch a feigned perſon. But the truth of my cauſe being ſo manifeſt, moved the moſt Chriſtian king *Charles*, and the lady ducheſs dowager of *Burgundy* my moſt dear aunt, not only to acknowledge the truth thereof, but lovingly to aſſiſt me. But it ſeemeth that God above (for the good of this whole iſland, and the knitting of theſe two kingdoms of *England* and *Scotland* in a ſtrait concord and amity, by ſo great an obligation) hath reſerved the placing of me in the imperial throne of *England*, for the arms and ſuccours of your grace. Neither is it the firſt time that a king of *Scotland* hath ſupported them that were bereft and ſpoiled of the kingdom of *England*, as of late (in freſh memory) it was done in the perſon of *Henry* the ſixth. Wherefore, for that your grace hath given clear ſigns, that you are in no noble quality inferior to your royal

anceſtors; I, ſo diſtreſſed a prince, was hereby moved to come and put my ſelf into your royal hands, deſiring your aſſiſtance to recover my kingdom of *England*; promiſing faithfully to bear my ſelf towards your grace no otherwiſe, than if I were your own natural brother; and will upon the recovery of mine inheritance, gratefully do you all the pleaſure that is in my utmoſt power.

After *Perkin* had told his tale, king *James* anſwered bravely and wiſely; that whatſoever he were, ſhould not repent him of putting himſelf into his hands. And from that time forth, though there wanted not ſome about him, that would have perſuaded him, that all was but an illuſion; yet notwithſtanding, either taken by *Perkin*'s amiable and alluring behaviour, or inclining to the recommendation of the great princes abroad, or willing to take an occaſion of a war againſt king *Henry*, he entertained him in all things, as became the perſon of *Richard* duke of *York*; embraced his quarrel; and (the more to put it out of doubt, that he took him to be a great prince, and not a repreſentation only) he gave conſent, that this duke ſhould take to wife the lady *Katharine Gordon*, daughter to the earl of *Huntley*, being a near kinſwoman to the king himſelf, and a young virgin of excellent beauty and virtue.

Not long after the king of *Scots* in perſon, with *Perkin* in his company, enter'd with a great army (though it conſiſted chiefly of borderers, being raiſed ſomewhat ſuddenly) into *Northumberland*. And *Perkin*, for a perfume before him as he went, cauſed to be publiſhed a (*a*) proclamation of this tenor following, in the name of *Richard* duke of *York*, true inheritor of the crown of *England*.

It hath pleaſed God, who putteth down the mighty from their ſeat, and exalteth the humble, and ſuffereth not the hopes of the juſt to periſh in the end, to give us means at the length to ſhew our ſelves armed unto our lieges and people of *England*. But far be it from us to intend their hurt or damage, or to make war upon them, otherwiſe than to deliver our ſelf and them from tyranny and oppreſſion. For our mortal enemy *Henry Tudor*, a falſe uſurper of the crown of *England*, (which to us by natural and lineal right appertaineth) knowing in his own heart our undoubted right, (we being the very *Richard* duke of *York*, younger ſon, and now ſurviving heir male of the noble and victorious *Edward* the fourth, late king of *England*) hath not only deprived us of our kingdom, but likewiſe by all foul and wicked means ſought to betray us, and bereave us of our life. Yet if his tyranny only extended it ſelf to our perſon, (although our royal blood teacheth us to be ſenſible of injuries) it ſhould be leſs to our grief. But this *Tudor*, who boaſteth himſelf to have overthrown a tyrant, hath ever ſince his firſt entrance into his uſurped reign, put little in practice, but tyranny and the feats thereof.

For king *Richard*, our unnatural uncle, although deſire of rule did blind him, yet in his other actions (like a true *Plantagenet*) was noble and loved the honour of the realm, and the contentment and comfort of his nobles and people. But this our mortal enemy (agreeable to the meanneſs of his birth) hath trodden under foot the honour of this nation; ſelling our beſt

(*a*) The original of this proclamation remaineth with ſir *Robert Cotton*, a worthy preſerver and treaſurer of rare antiquities: from whoſe manuſcripts I have had much light for the furniſhing of this work.

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confederates for money, and making merchandize of the blood, eſtates, and fortunes of our peers and ſubjects, by feigned wars, and diſhonourable peace, only to enrich his coffers. Nor unlike hath been his hateful miſgovernment, and evil deportments at home. Firſt, he hath (to fortify his falſe quarrel) cauſed divers nobles of this our realm (whom he held ſuſpect and ſtood in dread of) to be cruelly murdered; as our couſin ſir *William Stanley*, lord chamberlain, ſir *Simon Mountfort*, ſir *Robert Ratcliffe*, *William D'Aubigny*, *Humfrey Stafford*, and many others; beſides ſuch as have dearly bought their lives with intolerable ranſoms: Some of which nobles are now in the ſanctuary. Alſo he hath long kept, and yet keepeth in priſon, our right entirely well-beloved couſin, *Edward*, ſon and heir to our uncle duke of *Clarence*, and others; with-holding from them their rightful inheritance, to the intent they ſhould never be of might and power, to aid and aſſiſt us at our need, after the duty of their legiances. He alſo married by compulſion certain of our ſiſters, and alſo the ſiſter of our ſaid couſin the earl of *Warwick*, and divers other ladies of the royal blood, unto certain of his kinſmen and friends of ſimple and low degree; and putting a-part all well-diſpoſed nobles, he hath none in favour and truſt about his perſon, but biſhop *Fox*, *Smith*, *Bray*, *Lovel*, *Oliver King*, *David Owen*, *Riſeley*, *Turberville*, *Tiler*, *Cholmley*, *Empſon*, *James Hobart*, *John Cut*, *Garth*, *Henry Wyat*, and ſuch other caitifs and villains of birth, which by ſubtile inventions, and pilling of the people, have been the principal finders, occaſioners, and counſellors of the miſ-rule and miſchief now reigning in *England*.

We remembring theſe premiſſes, with the great and execrable offences daily committed, and done by our foreſaid great enemy, and his adherents, in breaking the liberties and franchiſes of our mother the holy church, upon pretences of wicked and heatheniſh policy, to the high diſpleaſure of Almighty God, beſides the manifold treaſons, abominable murders, manſlaughters, robberies, extortions, the daily pilling of the people by diſmes, taxes, tallages, benevolences, and other unlawful impoſitions, and grievous exactions, with many other heinous effects, to the likely deſtruction and deſolation of the whole realm: ſhall by God's grace, and the help and aſſiſtance of the great lords of our blood, with the counſel of other ſaid perſons, ſee that the commodities of our realm be employed to the moſt advantage of the ſame; the intercourſe of merchandiſe betwixt realm and realm, to be miniſtred and handled as ſhall more be to the common-weal and proſperity of our ſubjects; and all ſuch diſmes, taxes, tallages, benevolences, unlawful impoſitions, and grievous exactions, as be above rehearſed, to be foredone and laid apart; and never from henceforth to be called upon, but in ſuch caſes as our noble progenitors, kings of *England*, have of old time been accuſtomed to have the aid, ſuccour, and help of their ſubjects, and true liege-men.

And farther, we do out of our grace and clemency, hereby as well publiſh and promiſe to all our ſubjects remiſſion and free pardon of all by-paſt offences whatſoever, againſt our perſon and eſtate, in adhering to our ſaid enemy, by whom (we know well) they have been miſled, if they ſhall within time convenient ſubmit themſelves unto us. And for ſuch as ſhall come with the foremoſt to aſſiſt our righteous quarrel, we ſhall make them ſo far partakers of our princely favour and bounty, as ſhall be highly for the comfort of them and theirs, both during their life, and after their death: As alſo we ſhall by all means which God ſhall put into our hands, demean our ſelves to give royal contentment to all degrees and eſtates of

our people, maintaining the liberties of holy church in their entire, preſerving the honours, privileges, and preheminences of our nobles, from contempt or diſparagement, according to the dignity of their blood. We ſhall alſo unyoke our people from all heavy burdens and endurances, and confirm our cities, boroughs, and towns, in their charters and freedoms, with enlargement where it ſhall be deſerved; and in all points give our ſubjects cauſe to think, that the bleſſed and debonair government of our noble father king *Edward* (in his laſt times) is in us revived.

And foraſmuch as the putting to death, or taking alive of our ſaid mortal enemy, may be a mean to ſtay much effuſion of blood, which otherwiſe may enſue, if by compulſion or fair promiſes he ſhall draw after him any number of our ſubjects to reſiſt us, which we deſire to avoid, (though we be certainly informed, that our ſaid enemy is purpoſed and prepared to fly the land, having already made over great maſſes of the treaſure of our crown, the better to ſupport him in foreign parts) we do hereby declare, that whoſoever ſhall take or diſtreſs our ſaid enemy, (though the party be of never ſo mean a condition) he ſhall be by us rewarded with a thouſand pound in money, forthwith to be laid down to him, and an hundred marks by the year of inheritance; beſides that he may otherwiſe merit, both toward God, and all good people, for the deſtruction of ſuch a tyrant.

Lastly, we do all men to wit, and herein we take alſo God to witneſs, that whereas God hath moved the heart of our deareſt couſin, the king of *Scotland*, to aid us in perſon in this our righteous quarrel; it is altogether without any pact or promiſe, or ſo much as demand of any thing that may prejudice our crown or ſubjects: but contrariwiſe, with promiſe on our ſaid couſin's part, that whenſoever he ſhall find us in ſufficient ſtrength to get the upper hand of our enemy, (which we hope will be very ſuddenly) he will forthwith peaceably return into his own kingdom; contenting himſelf only with the glory of ſo honourable an enterprize, and our true and faithful love and amity: which we ſhall ever (by the grace of Almighty God) ſo order, as ſhall be to the great comfort of both kingdoms.

But *Perkin*'s proclamation did little edify with the people of *England*; neither was he the better welcome for the company he came in. Wherefore the king of *Scotland* ſeeing none came in to *Perkin*, nor none ſtirred any where in his favour, turned his enterprize into a road; and waſted and deſtroyed the countrey of *Northumberland* with fire and ſword. But hearing that there were forces coming againſt him, and not willing that they ſhould find his men heavy and laden with booty, he returned into *Scotland* with great ſpoils, deferring farther proſecution till another time. It is ſaid, that *Perkin* acting the part of a prince handſomely, when he ſaw the *Scotiſh* fell to waſte the countrey, came to the king in a paſſionate manner, making great lamentation, and deſired, that that might not be the manner of making the war; for that no crown was ſo dear to his mind, as that he deſired to purchaſe it with the blood and ruin of his countrey. Whereunto the king anſwered half in ſport, that he doubted much he was careful for that that was none of his, and that he ſhould be too good a *Steward* for his enemy, to ſave the country to his uſe.

By this time, being the eleventh year of the king, the interruption of trade between the *Engliſh* and the *Flemiſh*, began to pinch the merchants of both nations very ſore: which moved them by all means they could deviſe, to affect and diſpoſe their ſovereigns reſpectively, to open the intercourſe

courſe again; wherein time favoured them. For the Arch-duke and his council began to ſee, that *Perkin* would prove but a runagate, and citizen of the world; and that it was the part of children to fall out about babies. And the king on his part, after the attempts upon *Kent* and *Northumberland*, began to have the buſineſs of *Perkin* in leſs eſtimation; ſo as he did not put it to account in any conſultation of ſtate. But that that moved him moſt, was, that being a king that loved wealth and treaſure, he could not endure to have trade ſick, nor any obſtruction to continue in the gate-vein, which diſperſeth that blood. And yet he kept ſtate ſo far, as firſt to be ſought unto. Wherein the merchant-adventurers likewiſe, (being a ſtrong company at that time, and well underſet with rich men, and good order) did hold out bravely; taking off the commodities of the kingdom, though they lay dead upon their hands for want of vent. At the laſt, commiſſioners met at *London* to treat: On the king's part, biſhop *Fox* lord privy ſeal, viſcount *Wells*, *Kendal* prior of ſaint *John*'s, *Warham* maſter of the rolls, who began to gain much upon the king's opinion; *Urſwick*, who was almoſt ever one; and *Riſeley*: On the arch-duke's part, the lord *Bevers* his admiral, the lord *Verunſel* preſident of *Flanders*, and others. Theſe concluded a perfect treaty, both of amity and intercourſe, between the king and the arch-duke; containing articles both of ſtate, commerce, and free fiſhing. This is that treaty which the *Flemings* call at this day *intercurſus magnus*; both becauſe it is more compleat than the precedent treaties of the third and fourth year of the king; and chiefly, to give it a difference from the treaty that followed in the one and twentieth year of the king, which they call *intercurſus malus*. In this treaty, there was an expreſs article againſt the reception of the rebels of either prince by other; purporting, that if any ſuch rebel ſhould be required, by the prince whoſe rebel he was, of the prince confederate, that forthwith the prince confederate ſhould by proclamation command him to avoid the countrey: which if he did not within fifteen days, the rebel was to ſtand proſcribed, and put out of protection. But nevertheleſs in this article *Perkin* was not named, neither perhaps contained, becauſe he was no rebel. But by this means his wings were clipt of his followers that were *Engliſh*. And it was expreſsly compriſed in the treaty, that it ſhould extend to the territories of the ducheſs dowager. After the intercourſe thus reſtored, the *Engliſh* merchants came again to their manſion at *Antwerp*, where they were received with proceſſion and great joy.

The winter following, being the twelfth year of his reign, the king called again his parliament: where he did much exaggerate both the malice, and the cruel predatory war lately made by the king of *Scotland*: That that king, being in amity with him, and no ways provoked, ſhould ſo burn in hatred towards him, as to drink of the lees and dregs of *Perkin*'s intoxication, who was every where elſe detected and diſcarded: And that when he perceived it was out of his reach to do the king any hurt, he had turned his arms upon unarmed and unprovided people, to ſpoil only and depopulate, contrary to the laws both of war and peace: Concluding that he could neither with honour, nor with the ſafety of his people, to whom he did owe protection, let paſs theſe wrongs unrevenged. The parliament underſtood him well, and gave him a ſubſidy, limited to the ſum of one hundred and twenty thouſand pounds, beſides two fifteens: For his wars were always to him as a mine of treaſure, of a ſtrange kind of ore; iron at the top, and gold and ſilver at the bottom. At this parliament (for that there

there had been ſo much time ſpent in making laws the year before, and for that it was called purpoſely in reſpect of the *Scottiſh* war) there were no laws made to be remembred. Only there paſſed a law, at the ſuit of the merchant-adventurers of *England*, againſt the merchant-adventurers of *London*, for monopolizing and exacting upon the trade: which it ſeemeth they did a little to ſave themſelves, after the hard time they had ſuſtained by want of trade. But thoſe innovations were taken away by parliament.

But it was fatal to the king to fight for his money; and though he avoided to fight with enemies abroad, yet he was ſtill enforced to fight for it with rebels at home: For no ſooner began the ſubſidy to be levied in *Cornwal*, but the people there began to grudge and murmur. The *Corniſh* being a race of men, ſtout of ſtomach, mighty of body and limb, and that lived hardly in a barren countrey, and many of them could (for a need) live under ground, that were tinners. They muttered extremely, that it was a thing not to ſuffered, that for a little ſtir of the *Scots*, ſoon blown over, they ſhould be thus grinded to power with payments: and ſaid it was for them to pay that had too much, and lived idly. But they would eat their bread that they got with the ſweat of their brows, and no man ſhould take it from them. And as in the tides of people once up, there want not commonly ſtirring winds to make them more rough; ſo this people did light upon two ringleaders, or captains of the rout. The one was *Michael Joſeph*, a blackſmith or farrier of *Bodmin*, a notable talking fellow, and no leſs deſirous to be talked of. The other was *Thomas Flammock*, a lawyer, that by telling his neighbours commonly upon any occaſion that the law was on their ſide, had gotten great ſway amongſt them. This man talked learnedly, and as if he could tell how to make a rebellion, and never break the peace. He told the people, that ſubſidies were not to be granted, nor levied in this caſe; that is, for wars of *Scotland*: For that the law had provided another courſe, by ſervice of eſcuage, for thoſe journeys; much leſs when all was quiet, and war was made but a pretence to poll and pill the people. And therefore that it was good that they ſhould not ſtand like ſheep before the ſhearers, but put on harneſs, and take weapons in their hands. Yet to do no creature hurt; but go and deliver the king a ſtrong petition, for the laying down of thoſe grievous payments, and for the puniſhment of thoſe that had given him that council; to make others beware how they did the like in time to come. And ſaid, for his part he did not ſee how they could do the duty of true *Engliſhmen*, and good liege-men, except they did deliver the king from ſuch wicked ones, that would deſtroy both him and the countrey. Their aim was at archbiſhop *Morton*, and ſir *Reginald Bray*, who were the king's ſkreens in this envy.

After that theſe two, *Flammock* and the blackſmith, had by joint and ſeveral pratings, found tokens of conſent in the multitude, they offered themſelves to lead them, until they ſhould hear of better men to be their leaders, which they ſaid would be e'er long: Telling them farther, that they would be but their ſervants, and firſt in every danger; but doubted not but to make both the weſt-end and the eaſt-end of *England* to meet in ſo good a quarrel; and that all (rightly underſtood) was but for the king's ſervice. The people upon theſe ſeditious inſtigations, did arm, (moſt of them with bows, and arrows, and bills, and ſuch other weapons of rude and countrey people) and forthwith under the command of their leaders, (which in ſuch caſes is ever at pleaſure) marched out of *Cornwal* through *Devonſhire*,

*ſhire*, unto *Taunton* in *Somerſetſhire*, without any ſlaughter, violence, or ſpoil of the countrey. At *Taunton* they killed in fury an officious and eager commiſſioner for the ſubſidy, whom they called the provoſt of *Perin*. Thence they marched to *Wells*, where the lord *Audley* (with whom their leaders had before ſome ſecret intelligence) a nobleman of an ancient family, but unquiet and popular, and aſpiring to ruin, came in to them, and was by them (with great gladneſs and cries of joy) accepted as their general; they being now proud that they were led by a nobleman. The lord *Audley* led them on from *Wells* to *Saliſbury*, and from *Saliſbury* to *Wincheſter*. Thence the fooliſh people, who (in effect) led their leaders, had a mind to be led into *Kent*, fancying that the people there would join with them; contrary to all reaſon or judgment, conſidering the *Kentiſh* men had ſhewed great loyalty and affection to the king ſo lately before. But the rude people had heard *Flammock* ſay, that *Kent* was never conquered, and that they were the freeſt people of *England*. And upon theſe vain noiſes, they looked for great matters at their hands, in a cauſe which they conceited to be for the liberty of the ſubject. But when they were come into *Kent*, the countrey was ſo well ſettled, both by the king's late kind uſage towards them, and by the credit and power of the earl of *Kent*, the lord *Abergavenny*, and the lord *Cobham*, as neither gentleman nor yeoman came in to their aid; which did much damp and diſmay many of the ſimpler ſort; inſomuch as divers of them did ſecretly fly from the army, and went home: but the ſturdier ſort, and thoſe that were moſt engaged, ſtood by it, and rather waxed proud, than failed in hopes and courage. For as it did ſomewhat appall them, that the people came not into them; ſo it did no leſs encourage them, that the king's forces had not ſet upon them, having marched from the weſt unto the eaſt of *England*. Wherefore they kept on their way, and encamped upon *Blackheath*, between *Greenwich* and *Eltham*; threatning either to bid battle to the king, (for now the ſeas went higher than to *Morton* and *Bray)* or to take *London* within his view; imagining with themſelves, there to find no leſs fear than wealth.

But to return to the king. When firſt he heard of this commotion of the *Corniſh* men occaſioned by the ſubſidy, he was much troubled therewith; not for it ſelf, but in regard of the concurrence of other dangers that did hang over him at that time. For he doubted leſt a war from *Scotland*, a rebellion from *Cornwal*, and the practices and conſpiracies of *Perkin* and his partakers, would come upon him at once: Knowing well, that it was a dangerous triplicity to a monarchy, to have the arms of a foreigner, the diſcontents of ſubjects, and the title of a pretender to meet. Nevertheleſs the occaſion took him in ſome part well provided. For as ſoon as the parliament had broken up, the king had preſently raiſed a puiſſant army to war upon *Scotland*. And king *James* of *Scotland* likewiſe on his part, had made great preparations, either for defence, or for new aſſailing of *England*. But as for the king's forces, they were not only in preparation, but in readineſs preſently to ſet forth, under the conduct of *D'Aubigney* the lord chamberlain. But as ſoon as the king underſtood of the rebellion of *Cornwal*, he ſtayed thoſe forces, retaining them for his own ſervice and ſafety. But therewithal he diſpatched the earl of *Surrey* into the north, for the defence and ſtrength of thoſe parts, in caſe the *Scots* ſhould ſtir. But for the courſe he held towards the rebels, it was utterly differing from his former cuſtom and practice; which was ever full of forwardneſs and celerity to make head againſt them, or to ſet upon them as ſoon as ever they were in action.

action. This he was wont to do. But now, beſides that he was attempered by years, and leſs in love with dangers, by the continued fruition of a crown; it was a time when the various appearance to his thoughts of perils of ſeveral natures, and from divers parts, did make him judge it his beſt and ſureſt way, to keep his ſtrength together in the ſeat and center of his kingdom: According to the ancient *Indian* emblem, in ſuch a ſwelling ſeaſon, to hold the hand upon the middle of the bladder, that no ſide might riſe. Beſides, there was no neceſſity put upon him to alter his counſel. For neither did the rebels ſpoil the countrey, in which caſe it had been diſhonour to abandon his people: neither on the other ſide did their forces gather or increaſe, which might haſten him to precipitate and aſſail them before they grew too ſtrong. And laſtly, both reaſon of eſtate and war ſeemed to agree with this courſe: For that inſurrections of baſe people are commonly more furious in their beginnings. And by this means alſo he had them the more at advantage, being tired and harraſſed with a long march; and more at mercy, being cut off far from their countrey, and therefore not able by any ſudden flight to get or retreat, and to renew the troubles.

When therefore the rebels were encamped on *Black-heath* upon the hill, whence they might behold the city of *London*, and the fair valley about it; the king knowing well, that it ſtood him upon, by how much the more he had hitherto protracted the time in not encountering them, by ſo much the ſooner to diſpatch with them, that it might appear to have been no coldneſs in fore-ſlowing, but wiſdom in chuſing his time; reſolved with all ſpeed to aſſail them, and yet with that providence and ſurety, as ſhould leave little to venture or fortune. And having very great and puiſſant forces about him, the better to maſter all events and accidents, he divided them into three parts; the firſt was led by the earl of *Oxford* in chief, aſſiſted by the earls of *Eſſex* and *Suffolk*. Theſe noblemen were appointed, with ſome cornets of horſe, and bands of foot, and good ſtore of artillery, wheeling about to put themſelves beyond the hill where the rebels were encamped; and to beſet all the ſkirts and deſcents thereof, except thoſe that lay towards *London*; thereby to have theſe wild beaſts (as it were) in a toil. The ſecond part of his forces (which were thoſe that were to be moſt in action, and upon which he relied moſt for the fortune of the day) he did aſſign to be led by the lord chamberlain, who was appointed to ſet upon the rebels in front, from that ſide which is toward *London*. The third part of his forces (being likwiſe great and brave forces) he retained about himſelf, to be ready upon all events to reſtore the fight, or conſummate the victory; and mean while to ſecure the city. And for that purpoſe he encamped in perſon in ſaint *George*'s fields, putting himſelf between the city and the rebels. But the city of *London* (eſpecially at the firſt) upon the near encamping of the rebels, was in great tumult: As it uſeth to be with wealthy and populous cities, eſpecially thoſe which being for greatneſs and fortune queens of their regions; who ſeldom ſee out of their windows, or from their towers, an army of enemies. But that which troubled them moſt, was the conceit, that they dealt with a rout of people, with whom there was no compoſition or condition, or orderly treating, if need were; but likely to be bent altogether upon rapine and ſpoil. And although they had heard that the rebels had behaved themſelves quietly and modeſtly by the way as they went; yet they doubted much that would not laſt, but rather make them more hungry, and more in appetite to fall upon ſpoil in the end. Wherefore there was great running to and fro of people, ſome to the gates, ſome

to

to the walls, ſome to the water-ſide; giving themſelves alarms and panick fears continually. Nevertheleſs both *Tate* the lord mayor, and *Shaw* and *Haddon* the ſheriffs, did their parts ſtoutly and well, in arming and ordering the people. And the king likewiſe did adjoin ſome captains of experience in the wars, to adviſe and aſſiſt the citizens. But ſoon after, when they underſtood that the king had ſo ordered the matter, that the rebels muſt win three battels, before they could approach the city, and that he had put his own perſon between the rebels and them, and that the great care was, rather how to impound the rebels that none of them might eſcape, than that any doubt was made to vanquiſh them; they grew to be quiet and out of fear. The rather, for the confidence they repoſed (which was not ſmall) in the three leaders, *Oxford*, *Eſſex*, and *D'Aubigny*; all men well famed and loved amongſt the people. As for *Jaſper* duke of *Bedford*, whom the king uſed to employ with the firſt in his wars, he was then ſick, and died ſoon after.

It was the two and twentieth of *June*, and a *Saturday*, (which was the day of the week the king fancied,) when the battel was fought; though the king had by all the art he could deviſe, given out a falſe day, as if he prepared to give the rebels battel on the *Monday* following, the better to find them unprovided, and in diſarray. The lords that were appointed to circle the hill, had ſome days before planted themſelves (as at the receit) in places convenient. In the afternoon, towards the decline of the day, (which was done the better to keep the rebels in opinion that they ſhould not fight that day,) the lord *D'Aubigny* marched on towards them, and firſt beat ſome troops of them from *Deptford-bridge*, where they fought manfully: but being in no great number were ſoon driven back, and fled up to their main army upon the hill. The army at that time hearing of the approach of the king's forces, were putting themſelves in array, not without much confuſion. But neither had they placed upon the firſt high ground towards the bridge, any forces to ſecond the troops below, that kept the bridge; neither had they brought forwards their main battle, (which ſtood in array far into the heath) near to the aſcent of the hill. So that the earl with his forces mounted the hill, and recovered the plain without reſiſtance. The lord *D'Aubigny* charged them with great fury: inſomuch as it had like (by accident) to have branded the fortune of the day. For by inconſiderate forwardneſs in fighting in the head of his troops, he was taken by the rebels, but immediately reſcued and delivered. The rebels maintained the fight for a ſmall time, and for their perſons ſhewed no want of courage; but being ill armed, and ill led, and without horſe or artillery, they were with no great difficulty cut in pieces, and put to flight. And for their three leaders, the lord *Audley*, the blackſmith, and *Flammock*, (as commonly the captains of commotions are but half-couraged men) ſuffered themſelves to be taken alive. The number ſlain on the rebels part were ſome two thouſand men; their army amounting (as it is ſaid) unto the number of ſixteen thouſand. The reſt were (in effect) all taken; for that the hill (as was ſaid) was encompaſſed with the king's forces round about. On the king's part there died about three hundred, moſt of them ſhot with arrows, which were reported to be of the length of a taylor's yard; ſo ſtrong and mighty a bow the *Corniſh-men* were ſaid to draw.

The victory thus obtained, the king created divers bannerets, as well upon *Blackheath*, where his lieutenant had won the field, (whither he rode in perſon to perform the ſaid creation) as in St. *George*'s *Fields*, where his own

perſon had been encamped. And for matter of liberality, he did (by open edict) give the goods of all the priſoners unto thoſe that had taken them; either to take them in kind, or compound for them, as they could. After matter of honour and liberality, followed matter of ſeverity and execution. The lord *Audley* was led from *Newgate* to *Towerhill*, in a paper coat painted with his own arms; the arms reverſed, the coat torn, and at *Towerhill* beheaded. *Flammock* and the blackſmith were hanged, drawn and quartered at *Tyburn*: the blackſmith taking pleaſure upon the hurdle (as it ſeemeth by words that he uttered) to think that he ſhould be famous in after-times. The king was once in mind to have ſent down *Flammock* and the blackſmith to have been executed in *Cornwall*, for the more terror: but being advertiſed that the countrey was yet unquiet and boiling, he thought better not to irritate the people farther. All the reſt were pardoned by proclamation, and to take out their pardons under ſeal, as many as would. So that more than the blood drawn in the field, the king did ſatisfy himſelf with the lives of only three offenders, for the expiation of this great rebellion.

It was a ſtrange thing to obſerve the variety and inequality of the king's executions and pardons: and a man would think it at the firſt, a kind of lottery or chance. But looking into it more nearly, one ſhall find there was reaſon for it, much more, perhaps, than after ſo long a diſtance of time, we can now diſcern. In the *Kentiſh* commotion, (which was but an handful of men) there were executed to the number of one hundred and fifty: but in this ſo mighty a rebellion but three. Whether it were that the king put to account the men that were ſlain in the field, or that he was not willing to be ſevere in a popular cauſe, or that the harmleſs behaviour of this people (that came from the weſt of *England* to the eaſt, without miſchief almoſt, or ſpoil of the countrey) did ſomewhat mollify him, and move him to compaſſion; or laſtly, that he made a great difference between people that did rebel upon wantonneſs, and them that did rebel upon want.

After the *Corniſh* men were defeated, there came from *Calais* to the king an honourable embaſſage from the *French* king, which had arrived at *Calais* a month before, and there was ſtayed in reſpect of the troubles, but honourably entertained and defrayed. The king, at their firſt coming, ſent unto them, and prayed them to have patience, till a little ſmoak, that was raiſed in his countrey, were over, which would ſoon be: Slighting (as his manner was) that openly, which nevertheleſs he intended ſeriouſly.

This embaſſage concerned no great affair, but only the prolongation of days for payment of monies, and ſome other particulars of the frontiers. And it was (indeed) but a wooing embaſſage, with good reſpects to entertain the king in good affection; but nothing was done, or handled, to the derogation of the king's late treaty with the *Italians*.

But during the time that the *Corniſh* men were in their march towards *London*, the king of *Scotland* well advertiſed of all that paſſed, and knowing himſelf ſure of war from *England*, whenſoever thoſe ſtirs were appeaſed, neglected not his opportunity: But thinking the king had his hands full, entered the frontiers of *England* again with an army, and beſieged the caſtle of *Norham* in perſon, with part of his forces, ſending the reſt to forage the countrey. But *Fox* biſhop of *Dureſm*, (a wiſe man, and one that could ſee through the preſent to the future,) doubting as much before, had cauſed his caſtle of *Norham* to be ſtrongly fortified, and furniſhed with all kind of munition: and had manned it likewiſe with a very great number of

of tall ſoldiers, more than for the proportion of the caſtle, reckoning rather upon a ſharp aſſault, than a long ſiege. And for the countrey likewiſe, he had cauſed the people to withdraw their cattle and goods into faſt places, that were not eaſy of approach; and ſent in poſt to the earl of *Surrey* (who was not far off in *Yorkſhire)* to come in diligence to the ſuccour. So as the *Scotiſh* king both failed of doing good upon the caſtle, and his men had but a catching harveſt of their ſpoils: And when he underſtood that the earl of *Surrey* was coming on with great forces, he returned back into *Scotland.* The earl finding the caſtle freed, and the enemy retired, purſued with all celerity into *Scotland,* hoping to have overtaken the *Scotiſh* king, and to have given him battel. But not attaining him in time, ſate down before the caſtle of *Aton,* one of the ſtrongeſt places (then eſteemed) between *Berwick* and *Edinburgh,* which in a ſmall time he took. And ſoon after, the *Scotiſh* king retiring farther into his countrey, and the weather being extraordinary foul and ſtormy, the earl returned into *England.* So that the expeditions on both parts were (in effect) but a caſtle taken, and a caſtle diſtreſſed; not anſwerable to the puiſſance of the forces, nor to the heat of the quarrel, nor to the greatneſs of the expectation.

Amongst theſe troubles, both civil and external, came into *England* from *Spain, Peter Hialas,* ſome call him *Elias,* (ſurely he was the forerunner of the good hap that we enjoy at this day: for his embaſſage ſet the truce between *England* and *Scotland*; the truce drew on the peace, the peace the marriage, and the marriage the union of the kingdoms) a man of great wiſdom, and (as thoſe times were) not unlearned; ſent from *Ferdinando* and *Iſabella* king and queen of *Spain,* unto the king, to treat a marriage between *Katharine* their ſecond daughter, and prince *Arthur.* This treaty was by him ſet in a very good way, and almoſt brought to perfection. But it ſo fell out by the way, that upon ſome conference which he had with the king touching this buſineſs, the king (who had a great dexterity in getting ſuddenly into the boſom of embaſſadors of foreign princes, if he liked the men; inſomuch as he would many times communicate with them of his own affairs, yea, and employ them in his ſervice) fell into ſpeech and diſcourſe incidently, concerning the ending of the debates and differences with *Scotland.* For the king naturally did not love the barren wars with *Scotland,* though he made his profit of the noiſe of them. And he wanted not in the council of *Scotland,* thoſe that would adviſe their king to meet him at the half way, and to give over the war with *England,* pretending to be good patriots, but indeed favouring the affairs of the king. Only his heart was too great to begin with *Scotland* for the motion of peace. On the other ſide, he had met with an ally of *Ferdinando* of *Aragon,* as fit for his turn as could be. For after that king *Ferdinando* had upon aſſured confidence of the marriage to ſucceed, taken upon him the perſon of a fraternal ally to the king, he would not let (in a *Spaniſh* gravity) to counſel the king in his own affairs. And the king on his part not being wanting to himſelf, but making uſe of every man's humours, made his advantage of this in ſuch things as he thought either not decent, or not pleaſant to proceed from himſelf, putting them off as done by the counſel of *Ferdinando.* Wherefore he was content that *Hialas* (as in a matter moved and adviſed from *Hialas* himſelf) ſhould go into *Scotland,* to treat of a concord between the two kings. *Hialas* took it upon him, and coming to the *Scotiſh* king, after he had with much art brought king *James* to hearken to the more ſafe and quiet counſels, wrote unto the king, that he hoped that

peace would with no great difficulty cement and cloſe, if he would ſend ſome wiſe and temperate counſellor of his own, that might treat of the conditions. Whereupon the king directed biſhop *Fox*, (who at that time was at his caſtle of *Norham)* to confer with *Hialas*, and they both to treat with ſome commiſſioners deputed from the *Scotiſh* King. The commiſſioners on both ſides met. But after much diſpute upon the articles and conditions of peace, propounded upon either part, they could not conclude a peace. The chief impediment thereof, was the demand of the king to have *Perkin* delivered into his hands, as a reproach to all kings, and a perſon not protected by the law of nations. The king of *Scotland* on the other ſide peremptorily denied ſo to do, ſaying, that he (for his part) was no competent judge of *Perkin*'s title. But that he had received him as a ſuppliant, protected him as a perſon fled for refuge, eſpouſed him with his kinſwoman, and aided him with his arms, upon the belief that he was a prince. And therefore that he could not now with his honour ſo unrip and (in a ſort) put a lye upon all that he had ſaid and done before, as to deliver him up to his enemies. The biſhop likewiſe (who had certain proud inſtructions from the king, at the leaſt in the front, though there were a pliant clauſe at the foot, that remitted all to the biſhop's diſcretion, and required him by no means to break off in ill terms) after that he had failed to obtain the delivery of *Perkin*, did move a ſecond point of his inſtructions, which was, that the *Scotiſh* king would give the king an interview in perſon at *Newcaſtle*. But this being reported to the *Scotiſh* king, his anſwer was, that he meant to treat a peace, and not to go a begging for it. The biſhop alſo (according to another article of his inſtructions) demanded reſtitution of the ſpoils taken by the *Scots*, or damages for the ſame. But the *Scotiſh* commiſſioners anſwered, that that was but as water ſpilt upon the ground, which could not be gotten up again; and that the king's people were better able to bear the loſs, than their maſter to repair it. But in the end (as perſons capable of reaſon) on both ſides they made rather a kind of receſs, than a breach of treaty, and concluded upon a truce for ſome months following. But the king of *Scotland*, though he would not formally retract his judgment of *Perkin*, wherein he had engaged himſelf ſo far, yet in his private opinion, upon often ſpeech with the *Engliſhmen*, and divers other advertiſements, began to ſuſpect him for a counterfeit. Wherefore in a noble faſhion he called him unto him, and recounted the benefits and favours that he had done him in making him his ally, and in provoking a mighty and opulent king by an offenſive war in his quarrel, for the ſpace of two years together. Nay more, that he had refuſed an honourable peace, whereof he had a fair offer, if he would have delivered him; and that to keep his promiſe with him, he had deeply offended both his nobles and people, whom he might not hold in any long diſcontent: And therefore required him to think of his own fortunes, and to chuſe out ſome fitter place for his exile. Telling him withal, that he could not ſay, but the *Engliſh* had forſaken him before the *Scotiſh*; for that upon two ſeveral trials, none had declared themſelves on his ſide. But nevertheleſs he would make good what he ſaid to him at his firſt receiving, which was, that he ſhould not repent him, for putting himſelf into his hands; for that he would not caſt him off, but help him with ſhipping and means to tranſport him where he ſhould deſire. *Perkin* not deſcending at all from his ſtage-like greatneſs, anſwered the king in few words, that he ſaw his time was not yet come; but whatſoever his fortunes were, he ſhould both think and ſpeak honour of the

the king. Taking his leave, he would not think on *Flanders*, doubting it was but hollow ground for him, ſince the treaty of the arch-duke concluded the year before; but took his lady, and ſuch followers as would not leave him, and ſailed over into *Ireland*.

THIS twelfth year of the king, a little before this time, pope *Alexander* (who loved beſt thoſe princes that were fartheſt off, and with whom he had leaſt to do) taking very thankfully the king's late entrance into league for the defence of *Italy*, did remunerate him with an hallowed ſword and cap of maintenance, ſent by his nuncio. Pope *Innocent* had done the like, but it was not received in that glory: for the king appointed the mayor and his brethren to meet the pope's orator at *London* bridge, and all the ſtreets between the bridge foot and the palace of *Paul*'s (where the king then lay) were garniſhed with the citizens, ſtanding in their liveries. And the morrow after, (being *Alhallows* day) the king, attended with many of his prelates, nobles, and principal courtiers, went in proceſſion to *Paul*'s, and the cap and ſword were born before him. And after the proceſſion, the king himſelf remaining ſeated in the quire, the lord archbiſhop, upon the greece of the quire, made a long oration: ſetting forth the greatneſs and eminency of that honour which the pope (in theſe ornaments and enſigns of benediction) had done the king; and how rarely, and upon what high deſerts, they uſed to be beſtowed: And then receited the king's principal acts and merits, which had made him appear worthy in the eyes of his holineſs, of this great honour.

ALL this while the rebellion of *Cornwal*, (whereof we have ſpoken) ſeemed to have no relation to *Perkin*; ſave that perhaps *Perkin*'s proclamation had ſtricken upon the right vein, in promiſing to lay down exactions and payments, and ſo had made them now and then have a kind thought on *Perkin*. But now theſe bubbles by much ſtirring began to meet, as they uſe to do upon the top of water. The king's lenity (by that time the *Corniſh* rebels, who were taken and pardoned, and as it was ſaid, many of them ſold by them that had taken them, for twelve pence and two ſhillings a piece, were come down into their countrey) had rather imboldened them than reclaimed them; inſomuch as they ſtuck not to ſay to their neighbours and countreymen, that the king did well to pardon them, for that he knew he ſhould leave few ſubjects in *England*, if he hanged all that were of their mind: and began whetting and inciting one another to renew the commotion. Some of the ſubtileſt of them hearing of *Perkin*'s being in *Ireland*, found means to ſend to him to let him know, that if he would come over to them, they would ſerve him.

WHEN *Perkin* heard this news, he began to take heart again, and adviſed upon it with his council, which were principally three; *Herne* a mercer, that had fled for debt; *Skelton* a tailor, and *Aſtley* a ſcrivener; for ſecretary *Frion* was gone. Theſe told him, that he was mightily overſeen, both when he went into *Kent*, and when he went into *Scotland*; the one being a place ſo near *London*, and under the king's noſe; and the other a nation ſo diſtaſted with the people of *England*, that if they had loved him never ſo well, yet they would never have taken his part in that company. But if he had been ſo happy, as to have been in *Cornwal* at the firſt, when the people began to take arms there, he had been crowned at *Weſtminſter* before this time. For theſe kings (as he had now experience) would ſell poor princes for ſhoes. But he muſt rely wholly upon people; and therefore adviſed him to ſail over with all poſſible ſpeed into *Cornwal*: which accor-

accordingly he did; having in his company four ſmall barks, with ſome ſixſcore or ſevenſcore fighting men. He arrived in *September* at *Whitſand-Bay*, and forthwith came to *Bodmin* the blackſmith's town; where there aſſembled unto him to the number of three thouſand men of the rude people. There he ſet forth a new proclamation, ſtroaking the people with fair promiſes, and humouring them with invectives againſt the king and his government. And as it fareth with ſmoke, that never loſeth it ſelf till it be at the higheſt; he did now before his end raiſe his ſtyle, entitling himſelf no more *Richard* duke of *York*, but *Richard* the fourth king of *England*. His council adviſed him by all means to make himſelf maſter of ſome good walled town; as well to make his men find the ſweetneſs of rich ſpoils, and to allure to him all looſe and loſt people, by like hopes of booty; as to be a ſure retreat to his forces, in caſe they ſhould have any ill day, or unlucky chance in the field. Wherefore they took heart to them, and went on, and beſieged the city of *Exeter*, the principal town for ſtrength and wealth in thoſe parts.

When they were come before *Exeter*, they forbare to uſe any force at the firſt, but made continual ſhouts and outcries to terrify the inhabitants. They did likewiſe in divers places call and talk to them from under the walls, to join with them, and be of their party; telling them, that the king would make them another *London*, if they would be the firſt town that ſhould acknowledge him. But they had not the wit to ſend to them in any orderly faſhion, agents, or choſen men, to tempt them, and to treat with them. The citizens on their part ſhewed themſelves ſtout and loyal ſubjects: neither was there ſo much as any tumult or diviſion amongſt them, but all prepared themſelves for a valiant defence, and making good the town. For well they ſaw, that the rebels were of no ſuch number or power, that they needed to fear them as yet; and well they hoped, that before their numbers increaſed, the king's ſuccours would come in. And howſoever, they thought it the extreameſt of evils, to put themſelves at the mercy of thoſe hungry and diſorderly people. Wherefore ſetting all things in good order within the town, they nevertheleſs let down with cords from ſeveral parts of the walls privily, ſeveral meſſengers (that if one came to miſchance, another might paſs on) which ſhould advertiſe the king of the ſtate of the town, and implore his aid. *Perkin* alſo doubted, that ſuccours would come e'er long; and therefore reſolved to uſe his utmoſt force to aſſault the town. And for that purpoſe having mounted ſcaling ladders in divers places upon the walls, made at the ſame inſtant an attempt to force one of the gates. But having no artillery nor engines, and finding that he could do no good by ramming with logs of timber, nor by the uſe of iron bars, and iron crows, and ſuch other means at hand, he had no way left him but to ſet one of the gates on fire, which he did. But the citizens well perceiving the danger, before the gate could be fully conſumed, blocked up the gate, and ſome ſpace about it on the inſide, with faggots and other fuel, which they likewiſe ſet on fire, and ſo repulſed fire with fire. And in the mean time raiſed up rampiers of earth, and caſt up deep trenches, to ſerve inſtead of wall and gate. And for the ſcaladoes, they had ſo bad ſucceſs, as the rebels were driven from the walls with the loſs of two hundred men.

The king, when he heard of *Perkin*'s ſiege of *Exeter*, made ſport with it, and ſaid to them that were about him, that the king of rake-hells was landed in the weſt, and that he hoped now to have the honour to ſee him, which

which he could never yet do. And it appeared plainly to thoſe that were about the king, that he was indeed much joyed with the news of *Perkin*'s being in *Engliſh* ground, where he could have no retreat by land; thinking now, that he ſhould be cured of thoſe privy ſtitches, which he had had long about his heart, and had ſometimes broken his ſleep in the midſt of all his felicity. And to ſet all mens hearts on fire, he did by all poſſible means let it appear, that thoſe that ſhould now do him ſervice to make an end of theſe troubles, ſhould be no leſs accepted of him, than he that came upon the eleventh hour, and had the whole wages of the day. Therefore now (like the end of a play) a great number came upon the ſtage at once. He ſent the lord chamberlain, and the lord *Brook*, and ſir *Rice ap Thomas*, with expedite forces to ſpeed to *Exeter* to the reſcue of the town, and to ſpread the fame of his own following in perſon with a royal army. The earl of *Devonſhire*, and his ſon, with the *Carews*, and the *Fulfordes*, and other principal perſons of *Devonſhire*, (uncalled from the court, but hearing that the king's heart was ſo much bent upon this ſervice) made haſte with troops that they had raiſed, to be the firſt that ſhould ſuccour the city of *Exeter*, and prevent the king's ſuccours. The duke of *Buckingham* likewiſe, with many brave gentlemen, put themſelves in arms, not ſtaying either the king's or the lord chamberlain's coming on, but making a body of forces of themſelves, the more to endear their merit; ſignifying to the king their readineſs, and deſiring to know his pleaſure. So that according to the proverb, in the coming down, every ſaint did help.

Perkin hearing this thunder of arms, and preparations againſt him from ſo many parts, raiſed his ſiege, and marched to *Taunton*; beginning already to ſquint one eye upon the crown, and another upon the ſanctuary. Though the *Corniſh* men were become like metal often fired and quenched, churliſh, and that would ſooner break than bow; ſwearing and vowing not to leave him, till the uttermoſt drop of their blood were ſpilt. He was at his riſing from *Exeter* between ſix and ſeven thouſand ſtrong, many having come unto him after he was ſet before *Exeter*, upon fame of ſo great an enterprize, and to partake of the ſpoil; though upon the raiſing of his ſiege ſome did ſlip away. When he was come near *Taunton*, he diſſembed all fear, and ſeemed all the day to uſe diligence, in preparing all things ready to fight. But about midnight, he fled with threeſcore horſe to *Bewley* in the new foreſt, where he and divers of his company regiſtred themſelves ſanctuary men, leaving his *Corniſh* men to the four winds. But yet thereby eaſing them of their vow, and uſing his wonted compaſſion, not to be by when his ſubjects blood ſhould be ſpilt. The king, as ſoon as he heard of *Perkin*'s fight, ſent preſently five hundred horſe to purſue and apprehend him, before he ſhould get either to the ſea, or to that ſame little iſland, called a ſanctuary. But they came too late for the latter of theſe. Therefore all they could do, was to beſet the ſanctuary, and to maintain a ſtrong watch about it, till the king's pleaſure were farther known. As for the reſt of the rebels, they (being deſtituted of their head) without ſtroke ſtricken, ſubmitted themſelves unto the king's mercy. And the king, who commonly drew blood (as phyſicians do) rather to ſave life than to ſpill it, and was never cruel when he was ſecure; now he ſaw the danger was paſt, pardoned them all in the end, except ſome few deſperate perſons, which he reſerved to be executed, the better to ſet off his mercy towards the reſt. There were alſo ſent with all ſpeed ſome horſe to ſaint *Michael*'s mount in *Cornwall*, where the lady *Katharine Gordon* was left by her huſband, whom

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in all fortunes ſhe entirely loved; adding the virtues of a wife, to the virtues of her ſex. The king ſent in the greater diligence, not knowing whether ſhe might be with child, whereby the buſineſs would not have ended in *Perkin*'s perſon. When ſhe was brought to the king, it was commonly ſaid, that the king received her not only with compaſſion, but with affection; pity giving more impreſſion to her excellent beauty. Wherefore comforting her, (to ſerve as well his eye, as his fame) he ſent her to his queen to remain with her; giving her very honourable allowance for the ſupport of her eſtate, which ſhe enjoyed both during the king's life, and many years after. The name of the *White-roſe* (which had been given to her huſband's falſe title) was continued in common ſpeech to her true beauty.

The king went forwards on his journey, and made a joyful entrance into *Exeter*, where he gave the citizens great commendations and thanks; and taking the ſword he wore from his ſide, he gave it to the mayor, and commanded it ſhould be ever after carried before him. There alſo he cauſed to be executed ſome of the ring-leaders of the *Corniſh* men, in ſacrifice to the citizens, whom they had put in fear and trouble. At *Exeter* the king conſulted with his council whether he ſhould offer life to *Perkin* if he would quit the ſanctuary, and voluntarily ſubmit himſelf. The council were divided in opinion: ſome adviſed the king to take him out of ſanctuary perforce, and to put him to death, as in a caſe of neceſſity, which in it ſelf diſpenſeth with conſecrated places, and things: wherein they doubted not alſo but the king ſhould find the pope tractable to ratify his deed, either by declaration, or (at leaſt) by indulgence. Others were of opinion, (ſince all was now ſafe, and no farther hurt could be done) that it was not worth the expoſing of the king to new ſcandal and envy. A third ſort fell upon the opinion, that it was not poſſible for the king ever, either to ſatisfy the world well touching the impoſture, or to learn out the bottom of the conſpiracy, except by promiſe of life and pardon, and other fair means, he ſhould get *Perkin* into his hands. But they did all in their preambles much bemoan the king's caſe, with a kind of indignation at his fortune; that a prince of his high wiſdom and virtue, ſhould have been ſo long and ſo oft exerciſed and vexed with idols. But the king ſaid, that it was the vexation of God Almighty himſelf to be vexed with idols, and therefore that that was not to trouble any of his friends: and that for himſelf, he always deſpiſed them; but was grieved that they had put his people to ſuch trouble and miſery. But (in concluſion) he leaned to the third opinion, and ſo ſent ſome to deal with *Perkin:* Who ſeeing himſelf priſoner, and deſtitute of all hopes, having tried princes and people, great and ſmall, and found all either falſe, faint, or unfortunate, did gladly accept of the condition. The king did alſo (while he was at *Exeter)* appoint the lord *Darcy*, and others commiſſioners, for the finding of all ſuch as were of any value, and had any hand or partaking in the aid or comfort of *Perkin*, or the *Corniſh* men, either in the field or in the flight.

These commiſſioners proceeded with ſuch ſtrictneſs and ſeverity, as did much obſcure the king's mercy in ſparing of blood, with the bleeding of ſo much treaſure. *Perkin* was brought unto the king's court, but not to the king's preſence; though the king (to ſatisfy his curioſity) ſaw him ſometimes out of a window, or in paſſage. He was in ſhew at liberty, but guarded with all care and watch that was poſſible, and willed to follow the king to *London*. But from his firſt appearance upon the ſtage, in his new perſon of a ſycophant or jugler, inſtead of his former perſon of a prince, all

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men may think how he was expoſed to the deriſion, not only of the courtiers, but alſo of the common people, who flocked about him as he went along; that one might know afar off, where the owl was, by the flight of birds: ſome mocking, ſome wondering, ſome curſing, ſome prying and picking matter out of his countenance and geſture to talk of: So that the falſe honour and reſpects which he had ſo long enjoyed, was plentifully repaid in ſcorn and contempt. As ſoon as he was come to *London*, the king gave alſo the city the ſolace of this may-game: for he was conveyed leiſurely on horſeback (but not in any ignominious faſhion) through *Cheapſide* and *Cornhill*, to the tower; and from thence back again to *Weſtminſter*, with the *churm of a thouſand taunts and reproaches. But to amend the ſhow, there followed a little diſtance off *Perkin*, an inward counſellor of his, one that had been ſerjeant farrier to the king. This fellow, when *Perkin* took ſanctuary, choſe rather to take an holy habit, than an holy place, and clad himſelf like an hermit, and in that weed wander'd about the countrey, till he was diſcovered and taken. But this man was bound hand and foot upon the horſe, and came not back with *Perkin*, but was left at the tower, and within few days after executed. Soon after, now that *Perkin* could tell better what himſelf was, he was diligently examined; and after his confeſſion taken, an extract was made of ſuch parts of them, as were thought fit to be divulged, which was printed and diſperſed abroad: wherein the king did himſelf no right: for as there was a laboured tale of particulars, of *Perkin*'s father and mother, and grandſire and grandmother, and unkles and couſins, by names and ſirnames, and from what places he travelled up and down; ſo there was little or nothing to purpoſe of any thing concerning his deſigns, or any practices that had been held with him; nor the ducheſs of *Burgundy* her ſelf, (that all the world did take knowledge of, as the perſon that had put life and being into the whole buſineſs,) ſo much as named or pointed at. So that men miſſing of that they looked for, looked about for they knew not what, and were in more doubt than before: but the king choſe rather not to ſatisfy, than to kindle coals. At that time alſo it did not appear by any new examinations or commitments, that any other perſon of quality was diſcovered or appeached, though the king's cloſeneſs made that a doubt dormant.

*Cum choro.

About this time a great fire in the night-time ſuddenly began at the king's palace of *Shene*, near unto the king's own lodgings, whereby a great part of the building was conſumed, with much coſtly houſhold-ſtuff, which gave the king occaſion of building from the ground, that fine pile of *Richmond* which is now ſtanding.

Somewhat before this time alſo, there fell out a memorable accident: There was one *Sebaſtian Gabato*, a *Venetian*, dwelling in *Briſtol*, a man ſeen and expert in coſmography and navigation. This man ſeeing the ſucceſs, and emulating perhaps the enterprize of *Chriſtophorus Columbus* in that fortunate diſcovery towards the ſouthweſt, which had been by him made ſome ſix years before, conceited with himſelf, that lands might likewiſe be diſcovered towards the northweſt. And ſurely it may be he had more firm and pregnant conjectures of it, than *Columbus* had of this at the firſt. For the two great iſlands of the old and new world, being (in the ſhape and making of them) broad towards the north, and pointed towards the ſouth; it is likely, that the diſcovery firſt began where the lands did neareſt meet. And there had been before that time a diſcovery of ſome lands, which they took to be iſlands, and were indeed the continent of *America*, towards the

northweſt. And it may be, that ſome relation of this nature coming afterwards to the knowledge of *Columbus*, and by him ſuppreſſed, (deſirous rather to make his enterprize the child of his ſcience and fortune, than the follower of a former diſcovery) did give him better aſſurance, that all was not ſea, from the weſt of *Europe* and *Africa* unto *Aſia*, than either *Seneca*'s prophecy, or *Plato*'s antiquities, or the nature of the tides and land-winds, and the like, which were the conjectures that were given out, whereupon he ſhould have relied: though I am not ignorant, that it was likewiſe laid unto the caſual and wind-beaten diſcovery (a little before) of a *Spaniſh* pilot, who died in the houſe of *Columbus*. But this *Gabato* bearing the king in hand, that he would find out an iſland endued with rich commodities, procured him to man and victual a ſhip at *Briſtol*, for the diſcovery of that iſland: with whom ventured alſo three ſmall ſhips of *London* merchants, fraught with ſome groſs and ſlight wares, fit for commerce with barbarous people. He ſailed (as he affirmed at his return, and made a chart thereof,) very far weſtwards, with a quarter of the north, on the north ſide of *Tierra de Labrador*, until he came to the latitude of ſixty ſeven degrees and an half, finding the ſeas ſtill open. It is certain alſo, that the king's fortune had a tender of that great empire of the *Weſt-Indies*. Neither was it a refuſal on the king's part, but a delay by accident, that put by ſo great an acqueſt: for *Chriſtophorus Columbus* refuſed by the king of *Portugal*, (who would not embrace at once both eaſt and weſt) employed his Brother *Bartholomaeus Columbus* unto king *Henry*, to negotiate for his diſcovery: and it ſo fortuned, that he was taken by pirates at ſea, by which accidental impediment he was long e'er he came to the king: ſo long, that before he had obtained a capitulation with the king for his brother, the enterprize by him was atchieved, and ſo the *Weſt-Indies* by providence were then reſerved for the crown of *Caſtile*. Yet this ſharpen'd the king ſo, that not only in this voyage, but again in the ſixteenth year of his reign, and likewiſe in the eighteenth thereof, he granted forth new commiſſions for the diſcovery and inveſting of unknown lands.

In this fourteenth year alſo (by God's wonderful providence, that boweth things unto his will, and hangeth great weights upon ſmall wires) there fell out a trifling and untoward accident, that drew on great and happy effects. During the truce with *Scotland*, there were certain *Scotiſh* young gentlemen that came into *Norham* town, and there made merry with ſome of the *Engliſh* of the town: And having little to do, went ſometimes forth, and would ſtand looking upon the caſtle. Some of the gariſon of the caſtle, obſerving this their doing twice or thrice, and having not their minds purged of the late ill blood of hoſtility, either ſuſpected them, or quarrelled them for ſpies: whereupon they fell at ill words, and from words to blows; ſo that many were wounded of either ſide, and the *Scotiſh* men, (being ſtrangers in the town) had the worſt; inſomuch as ſome of them were ſlain, and the reſt made haſte home. The matter being complained on, and often debated before the wardens of the marches of both ſides, and no good order taken; the king of *Scotland* took it to himſelf, and being much kindled, ſent a herald to the king to make proteſtation, that if reparation were not done, according to the conditions of the truce, his king did denounce war. The king (who had often tryed fortune, and was inclined to peace) made anſwer, that what had been done, was utterly againſt his will, and without his privity: but if the gariſon ſoldiers had been in fault, he would ſee them puniſhed, and the truce in all points to be preſerved. But this anſwer

ſeemed

ſeemed to the *Scotiſh* king but a delay, to make the complaint breathe out with time; and therefore it did rather exaſperate him, than ſatisfy him. Biſhop *Fox*, underſtanding from the king that the *Scotiſh* king was ſtill diſcontent and impatient, being troubled that the occaſion of breaking of the truce ſhould grow from his men, ſent many humble and deprecatory letters to the *Scotiſh* king to appeaſe him. Whereupon king *James*, mollified by the biſhop's ſubmiſſive and eloquent letters, wrote back unto him, that though he were in part moved by his letters, yet he ſhould not be fully ſatisfied, except he ſpake with him, as well about the compounding of the preſent differences, as about other matters that might concern the good of both kingdoms. The biſhop adviſing firſt with the king, took his journey for *Scotland*. The meeting was at *Melroſs*, an abbey of the *Ciſtercians*, where the king then abode. The king firſt roundly uttered unto the biſhop his offence conceived, for the inſolent breach of truce, by his men of *Norham* caſtle: whereunto biſhop *Fox* made ſuch an humble and ſmooth anſwer, as it was like oil into the wound, whereby it began to heal: and this was done in the preſence of the king and his council. After, the king ſpake with the biſhop apart, and opened himſelf unto him, ſaying, that theſe temporary truces and peaces were ſoon made, and ſoon broken; but that he deſired a ſtraiter amity with the king of *England*, diſcovering his mind; that if the king would give him in marriage the lady *Margaret* his eldeſt daughter, that indeed might be a knot indiſſoluble. That he knew well what place and authority the biſhop deſervedly had with his maſter: therefore, if he would take the buſineſs to heart, and deal in it effectually, he doubted not but it would ſucceed well. The biſhop anſwered ſoberly, that he thought himſelf rather happy than worthy, to be an inſtrument in ſuch a matter, but would do his beſt endeavour. Wherefore the biſhop returning to the king, and giving account what had paſſed, and finding the king more than well diſpoſed in it, gave the king advice; firſt to proceed to a concluſion of peace, and then to go on with the treaty of marriage by degrees. Hereupon a peace was concluded, which was publiſhed a little before *Chriſtmas*, in the fourteenth year of the king's reign, to continue for both the kings lives, and the over-liver of them, and a year after. In this peace there was an article contained, that no *Engliſh* man ſhould enter into *Scotland*, and no *Scotiſh* man into *England*, without letters commendatory from the kings of either nation. This at the firſt ſight might ſeem a means to continue a ſtrangeneſs between the nations; but it was done to lock in the borderers.

This year there was alſo born to the king a third ſon, who was chriſten'd by the name of *Edmund*, and ſhortly after died. And much about the ſame time came news of the death of *Charles* the *French* king, for whom there were celebrated ſolemn and princely obſequies.

It was not long but *Perkin* (who was made of quickſilver, which is hard to hold or impriſon) began to ſtir. For deceiving his keepers, he took him to his heels, and made ſpeed to the ſea-coaſts. But preſently all corners were laid for him, and ſuch diligent purſuit and ſearch made, as he was fain to turn back, and get him to the houſe of *Bethlehem*, called the priory of *Shene*, (which had the privilege of ſanctuary) and put himſelf into the hands of the prior of that monaſtery. The prior was thought an holy man, and much reverenced in thoſe days. He came to the king, and beſought the king for *Perkin*'s life only, leaving him otherwiſe to the king's diſcretion. Many about the king were again more hot than ever, to have the king to

take him forth, and hang him. But the king, (that had an high ſtomach, and could not hate any that he deſpiſed) bid, take him forth, and ſet the knave in the ſtocks. And ſo promiſing the prior his life, he cauſed him to be brought forth. And within two or three days after, upon a ſcaffold ſet up in the palace court at *Weſtminſter*, he was fettered and ſet in the ſtocks for a whole day. And the next day after, the like was done by him at the croſs in *Cheapſide*, and in both places he read his confeſſion, of which we made mention before; and was from *Cheapſide* conveyed and layed up in the tower. Notwithſtanding all this, the king was (as was partly touched before) grown to be ſuch a partner with fortune, as no body could tell what actions the one, and what the other owned. For it was believed generally, that *Perkin* was betrayed, and that this eſcape was not without the king's privity, who had him all the time of his flight in a line; and that the king did this, to pick a quarrel to him to put him to death, and to be rid of him at once: but this is not probable. For that the ſame inſtruments who obſerved him in his flight, might have kept him from getting into ſanctuary.

But it was ordained, that this winding-ivy of a *Plantagenet*, ſhould kill the true tree it ſelf. For *Perkin*, after he had been a while in the tower, began to inſinuate himſelf into the favour and kindneſs of his keepers, ſervants to the lieutenant of the tower ſir *John Digby*, being four in number; *Strangeways*, *Blewet*, *Aſtwood* and long *Roger*. Theſe varlets, with mountains of promiſes he fought to corrupt, to obtain his eſcape; but knowing well, that his own fortunes were made ſo contemptible, as he could feed no man's hopes, (and by hopes he muſt work, for rewards he had none) he had contrived with himſelf a vaſt and tragical plot; which was, to draw into his company *Edward Plantagenet* earl of *Warwick*, then priſoner in the tower; whom the weary life of a long impriſonment, and the often and renewing fears of being put to death, had ſoftned to take any impreſſion of counſel for his liberty. This young prince he thought theſe ſervants would look upon, though not upon himſelf: and therefore after that by ſome meſſage by one or two of them, he had taſted of the earl's conſent; it was agreed that theſe four ſhould murder their maſter the lieutenant ſecretly in the night, and make their beſt of ſuch money and portable goods of his, as they ſhould find ready at hand, and get the keys of the tower, and preſently let forth *Perkin* and the earl. But this conſpiracy was revealed in time, before it could be executed. And in this again the opinion of the king's great wiſdom did ſurcharge him with a ſiniſter fame, that *Perkin* was but his bait, to entrap the earl of *Warwick*. And in the very inſtant while this conſpiracy was in working, (as if that alſo had been the king's induſtry) it was fatal, that there ſhould break forth a counterfeit earl of *Warwick*, a cordwainer's ſon, whoſe name was *Ralph Wilford*; a young man taught and ſet on by an *Auguſtin* friar, called *Patrick*. They both from the parts of *Suffolk*, came forwards into *Kent*, where they did not only privily and underhand give out, that this *Wilford* was the true earl of *Warwick*, but alſo the friar finding ſome light credence in the people, took the boldneſs in the pulpit to declare as much, and to incite the people to come in to his aid. Whereupon they were both preſently apprehended, and the young fellow executed, and the friar condemned to perpetual impriſonment. This alſo happening ſo opportunely, to repreſent the danger to the king's eſtate from the earl of *Warwick*, and thereby to colour the king's ſeverity that followed; together with the madneſs of the friar ſo vainly and deſperately

rately to divulge a treaſon, before it had gotten any manner of ſtrength; and the ſaving of the friar's life, which nevertheleſs was (indeed) but the privilege of his order; and the pity in the common people (which if it run in a ſtrong ſtream doth ever caſt up ſcandal and envy) made it generally rather talked than believed, that all was but the king's device. But howſoever it were, hereupon *Perkin* (that had offended againſt grace now the third time) was at the laſt proceeded with, and by commiſſioners of oyer and terminer, arraigned at *Weſtminſter*, upon divers treaſons committed and perpetrated after his coming on land within this kingdom (for ſo the judges adviſed, for that he was a foreigner,) and condemned, and a few days after executed at *Tyburn*; where he did again openly read his confeſſion, and take it upon his death to be true. This was the end of this little cockatrice of a king, that was able to deſtroy thoſe that did not eſpy him firſt. It was one of the longeſt plays of that kind that hath been in memory, and might perhaps have had another end, if he had not met with a king both wiſe, ſtout and fortunate.

As for *Perkin*'s three counſellors, they had regiſtred themſelves ſanctuarymen when their maſter did; and whether upon pardon obtained, or continuance within the privilege, they came not to be proceeded with.

THERE were executed with *Perkin*, the mayor of *Cork* and his ſon, who had been principal abettors of his treaſons. And ſoon after were likewiſe condemned eight other perſons about the tower conſpiracy, whereof four were the lieutenant's men: But of thoſe eight, but two were executed. And immediately after was arraigned before the earl of *Oxford*, (then for the time high ſteward of *England*) the poor prince, the earl of *Warwick*; not for the attempt to eſcape ſimply (for that was not acted; and beſides, the impriſonment not being for treaſon, the eſcape by law could not be treaſon) but for conſpiring with *Perkin* to raiſe ſedition, and to deſtroy the king: and the earl confeſſing the indictment, had judgment, and was ſhortly after beheaded on tower-hill.

THIS was alſo the end, not only of this noble and commiſerable perſon *Edward* the earl of *Warwick*, eldeſt ſon to the duke of *Clarence*; but likewiſe of the line male of the *Plantagenets*, which had flouriſhed in great royalty and renown, from the time of the famous king of *England*, king *Henry* the ſecond. Howbeit it was a race often dipped in their own blood. It hath remained ſince only tranſplanted into other names, as well of the imperial line, as of other noble houſes. But it was neither guilt of crime, nor reaſon of ſtate, that could quench the envy that was upon the king for this execution: ſo that he thought good to export it out of the land, and to lay it upon his new ally, *Ferdinando* king of *Spain*. For theſe two kings underſtanding one another at half a word, ſo it was that there were letters ſhewed out of *Spain*, whereby in the paſſages concerning the treaty of the marriage, *Ferdinando* had written to the king in plain terms, that he ſaw no aſſurance of his ſucceſſion, as long as the earl of *Warwick* lived; and that he was loth to ſend his daughter to troubles and dangers. But hereby, as the king did in ſome part remove the envy from himſelf; ſo he did not obſerve, that he did withal bring a kind of malediction and infauſting upon the marriage, as an ill prognoſtick: Which in event ſo far proved true, as both prince *Arthur* enjoyed a very ſmall time after the marriage, and the lady *Katharine* her ſelf (a ſad and a religious woman) long after, when king *Henry* the eighth his reſolution of a divorce from her, was firſt made known to her, uſed ſome words, that ſhe had not offended, but it was a judgment

judgment of God, for that her former marriage was made in blood; meaning that of the earl of *Warwick*.

This fifteenth year of the king, there was a great plague both in *London* and in divers parts of the kingdom. Wherefore the king, after often changing of places, (whether to avoid the danger of the ſickneſs, or to give occaſion of an interview with the archduke, or both) ſailed over with his queen to *Calais*. Upon his coming thither, the arch-duke ſent an honourable embaſſage unto him, as well to welcome him into thoſe parts, as to let him know, that (if it pleaſed him) he would come and do him reverence. But it was ſaid withal, that the king might be pleaſed to appoint ſome place, that was out of any walled town or fortreſs, for that he had denied the ſame upon like occaſion to the *French* king: And though he ſaid he made a great difference between the two kings, yet he would be loth to give a precedent, that might make it after to be expected at his hands, by another whom he truſted leſs. The king accepted of the courteſy, and admitted of his excuſe, and appointed the place to be at ſaint *Peter*'s church without *Calais*. But withal he did viſit the arch-duke with embaſſadors ſent from himſelf, which were the lord *Saint John*, and the ſecretary; unto whom the arch-duke did the honour, as (going to maſs at ſaint *Omer*'s) to ſet the lord *Saint John* on his right hand, and the ſecretary on his left, and ſo to ride between them to church. The day appointed for the interview the king went on horſeback ſome diſtance from ſaint *Peter*'s church, to receive the archduke: And upon their approaching, the archduke made haſte to light, and offered to hold the king's ſtirrup at his alighting; which the king would not permit, but deſcending from horſeback, they embraced with great affection; and withdrawing into the church to a place prepared, they had long conference, not only upon the confirmation of former treaties, and the freeing of commerce, but upon croſs marriages, to be had between the duke of *York* the king's ſecond ſon, and the arch-duke's daughter; and again between *Charles* the arch-duke's ſon and heir, and *Mary*, the king's ſecond daughter. But theſe bloſſoms of unripe marriages, were but friendly wiſhes, and the airs of loving entertainment; though one of them came afterwards to concluſion in treaty, though not in effect. But during the time that the two princes converſed and communed together in the ſuburbs of *Calais*, the demonſtrations on both ſides were paſſing hearty and affectionate, eſpecially on the part of the arch-duke: who (beſides that he was a prince of an excellent good nature) being conſcious to himſelf how drily the king had been uſed by his council in the matter of *Perkin*, did ſtrive by all means to recover it in the king's affection. And having alſo his ears continually beaten with the councils of his father and father-in-law, who (in reſpect of their jealous hatred againſt the *French* king) did always adviſe the arch-duke to anchor himſelf upon the amity of king *Henry* of *England*; was glad upon this occaſion to put in ure and practice their precepts, calling the king patron, and father, and protector, (theſe very words the king repeats, when he certified of the loving behaviour of the arch-duke to the city) and what elſe he could deviſe, to expreſs his love and obſervance to the king. There came alſo to the king, the governour of *Picardy*, and the bailiff of *Amiens*, ſent from *Lewis* the *French* king to do him honour, and to give him knowledge of his victory, and winning of the duchy of *Milan*. It ſeemeth the king was well pleaſed with the honours he received from thoſe parts, while he was at *Calais*; for he did himſelf certify all the news and occurrents of them in every particular from *Calais*, to the mayor

mayor and aldermen of *London*, which (no doubt) made no ſmall talk in the city. For the king, though he could not entertain the good-will of the citizens, as *Edward* the fourth did; yet by affability and other princely graces, did ever make very much of them, and apply himſelf to them.

This year alſo died *John Morton*, archbiſhop of *Canterbury*, chancellor of *England*, and cardinal. He was a wiſe man, and an eloquent, but in his nature harſh and haughty; much accepted by the king, but envied by the nobility, and hated of the people. Neither was his name left out of *Perkin*'s proclamation for any good will, but they would not bring him in amongſt the king's caſting counters, becauſe he had the image and ſuperſcription upon him of the pope, in his honour of cardinal. He wone the king with ſecrecy and diligence, but chiefly becauſe he was his old ſervant in his leſs fortunes: and alſo for that (in his affections) he was not without an inveterate malice againſt the houſe of *York*, under whom he had been in trouble. He was willing alſo to take envy from the king, more than the king was willing to put upon him: For the king cared not for ſubterfuges, but would ſtand envy, and appear in any thing that was to his mind; which made envy ſtill grow upon him more univerſal, but leſs daring. But in the matter of exactions, time did after ſhew, that the biſhop in feeding the king's humour, did rather temper it. He had been by *Richard* the third committed (as in cuſtody) to the duke of *Buckingham*, whom he did ſecretly incite to revolt from king *Richard*. But after the duke was engaged, and thought the biſhop ſhould have been his chief pilot in the tempeſt, the biſhop was gotten into the cock-boat, and fled over beyond ſeas. But whatſoever elſe was in the man, he deſerveth a moſt happy memory; in that he was the principal mean of joining the two roſes. He died of great years, but of ſtrong health and powers.

The next year, which was the ſixteenth year of the king, and the year of our Lord one thouſand five hundred, was the year of jubilee at *Rome*. But pope *Alexander*, to ſave the hazard and charges of mens journeys to *Rome*, thought good to make over thoſe graces by exchange, to ſuch as would pay a convenient rate, ſeeing they could not come to fetch them. For which purpoſe was ſent into *England*, *Jaſper Pons*, a *Spaniard*, the pope's commiſſioner, better choſen than were the commiſſioners of pope *Leo* afterwards employed for *Germany*; for he carried the buſineſs with great wiſdom, and ſemblance of holineſs: Inſomuch as he levied great ſums of money within this land to the pope's uſe, with little or no ſcandal. It was thought the king ſhared in the money. But it appeareth by a letter which cardinal *Adrian*, the king's penſioner, wrote to the king from *Rome* ſome few years after, that this was not ſo. For this cardinal being to perſuade pope *Julius* on the king's behalf, to expedite the bull of diſpenſation for the marriage between prince *Henry* and the lady *Katharine*, finding the pope difficile in granting thereof, doth uſe it as a principal argument concerning the king's merit towards that ſee, that he had touched none of thoſe deniers which had been levied by *Pons* in *England*. But that it might the better appear (for the ſatisfaction of the common people) that this was conſecrate money, the ſame nuncio brought unto the king a brief from the pope, wherein the king was exhorted and ſummoned to come in perſon againſt the *Turk*: For that the pope (out of the care of an univerſal father) ſeeing almoſt under his eyes the ſucceſſes and progreſſes of that great enemy of the faith, had had in the conclave, and with the aſſiſtance of the embaſſadors of foreign princes, divers conſultations about an holy war, and a

general

general expedition of Chriſtian princes againſt the *Turk:* wherein it was agreed and thought fit, that the *Hungarians*, *Polonians*, and *Bohemians*, ſhould make a war upon *Thracia*; the *French* and *Spaniards* upon *Graecia*; and that the pope (willing to ſacrifice himſelf in ſo good a cauſe) in perſon, and in company of the king of *England*, the *Venetians*, and ſuch other ſtates as were great in maritime power, would ſail with a puiſſant navy through the *Mediterranean* unto *Conſtantinople*. And that to this end, his holineſs had ſent nuncio's to all Chriſtian princes; as well for a ceſſation of all quarrels and differences amongſt themſelves, as for ſpeedy preparations and contributions of forces and treaſure for this ſacred enterprize.

To this the king, (who underſtood well the court of *Rome)* made an anſwer rather ſolemn than ſerious: ſignifying,

That no prince on earth ſhould be more forward and obedient, both by his perſon, and by all his poſſible forces and fortunes, to enter into this ſacred war, than himſelf. But that the diſtance of place was ſuch, as no forces that he ſhould raiſe for the ſeas, could be levied or prepared but with double the charge, and double the time, (at the leaſt) that they might be from the other princes, that had their territories nearer adjoining. Beſides, that neither the manner of his ſhips (having no gallies) nor the experience of his pilots and mariners, could be ſo apt for thoſe ſeas as theirs. And therefore that his holineſs might do well to move one of thoſe other kings, who lay fitter for the purpoſe, to accompany him by ſea. Whereby both all things would be ſooner put in readineſs, and with leſs charge, and the emulation and diviſion of command, which might grow between thoſe kings of *France* and *Spain*, if they ſhould both join in the war by land upon *Graecia*, might be wiſely avoided: And that for his part he would not be wanting in aids and contribution. Yet notwithſtanding, if both theſe kings ſhould refuſe, rather than his holineſs ſhould go alone, he would wait upon him as ſoon as he could be ready: Always provided, that he might firſt ſee all differences of the Chriſtian princes amongſt themſelves fully laid down and appeaſed, (as for his own part he was in none) and that he might have ſome good towns upon the coaſt in *Italy*, put into his hands, for the retreat and ſafeguard of his men.

With this anſwer *Jaſper Pons* returned, nothing at all diſcontented: And yet this declaration of the king (as ſuperficial as it was) gave him that reputation abroad, as he was not long after elected by the knights of *Rhodes* protector of their order; all things multiplying to honour, in a prince that had gotten ſuch high eſtimation for his wiſdom and ſufficiency.

There were theſe two laſt years ſome proceedings againſt hereticks, which was rare in this king's reign, and rather by penances than by fire. The king had (though he were no good ſchoolman) the honour to convert one of them by diſpute at *Canterbury*.

This year alſo, though the king were no more haunted with ſprites, for that by the ſprinkling, partly of blood, and partly of water, he had chaſed them away; yet nevertheleſs he had certain apparitions that troubled him, ſtill ſhewing themſelves from one region, which was the houſe of *York*. It came ſo to paſs, that the earl of *Suffolk*, ſon to *Elizabeth* eldeſt ſiſter to king *Edward* the fourth, by *John* Duke of *Suffolk* her ſecond huſband, and brother to *John* earl of *Lincoln*, that was ſlain at *Stokefield*, being of an haſty and cholerick diſpoſition, had killed a man in his fury; whereupon the king gave him his pardon. But either willing to leave a cloud upon him, or the better to make him feel his grace, produced him openly to plead

plead his pardon. This wrought in the earl, as in a haughty ſtomach it uſeth to do, for the ignominy printed deeper than the grace. Wherefore he being diſcontent, fled ſecretly into *Flanders*, unto his aunt the ducheſs of *Burgundy*. The king ſtartled at it. But being taught by troubles to uſe fair and timely remedies, wrought ſo with him by meſſages, (the lady *Margaret* alſo growing, by often failing in her alchymy, weary of her experiments; and partly, being a little ſweetned, for that the king had not touched her name in the confeſſion of *Perkin*) that he came over again upon good terms, and was reconciled to the king.

In the beginning of the next year, being the ſeventeenth of the king, the lady *Katharine*, fourth daughter of *Ferdinando* and *Iſabella*, king and queen of *Spain*, arrived in *England* at *Plymouth* the ſecond of *October*, and was married to prince *Arthur* in *Paul's*, the fourteenth of *November* following: the prince being then about fifteen years of age, and the lady about eighteen. The manner of her receiving, the manner of her entry into *London*, and the celebrity of the marriage were performed with great and true magnificence, in regard of coſt, ſhew and order. The chief man that took the care was biſhop *Fox*, who was not only a grave counſellor for war or peace, but alſo a good ſurveyor of works, and a good maſter of ceremonies, and any thing elſe that was fit for the active part, belonging to the ſervice of the court or ſtate of a great king. This marriage was almoſt ſeven years in treaty, which was in part cauſed by the tender years of the marriage couple, eſpecially of the prince; but the true reaſon was, that theſe two princes being princes of great policy and profound judgment, ſtood a great time looking one upon another's fortunes, how they would go; knowing well, that in the mean time the very treaty it ſelf gave abroad in the world a reputation of a ſtrait conjunction and amity between them, which ſerved on both ſides to many purpoſes, that their ſeveral affairs required, and yet they continued ſtill free. But in the end, when the fortunes of both the princes did grow every day more and more proſperous and aſſured, and that looking all about them, they ſaw no better conditions, they ſhut it up.

The marriage money the princeſs brought (which was turned over to the king by act of renunciation) was two hundred thouſand ducats: whereof one hundred thouſand were payable ten days after the ſolemnization, and the other hundred thouſand at two payments annual; but part of it to be in jewels and plate, and a due courſe ſet down to have them juſtly and indifferently prized. The jointure or advancement of the lady, was the third part of the principality of *Wales*, and of the dukedom of *Cornwal*, and of the earldom of *Cheſter*, to be after ſet forth in ſeveralty: and in caſe ſhe came to be queen of *England*, her advancement was left indefinite, but thus; that it ſhould be as great, as ever any former queen of *England* had.

In all the devices and conceits of the triumphs of this marriage, there was a great deal of aſtronomy: the lady being reſembled to *Heſperus*, and the prince to *Arcturus*, and the old king *Alphonſus* (that was the greateſt aſtronomer of kings, and was anceſtor to the lady) was brought in, to be the fortune-teller of the match; and whoſoever had thoſe toys in compiling, they were not altogether pedantical: but you may be ſure, that king *Arthur* the *Britain*, and the deſcent of the lady *Katharine* from the houſe of *Lancaſter*, was in no wiſe forgotten. But (as it ſhould ſeem) it is not good to fetch fortunes from the ſtars: For this young prince (that drew upon him at that time, not only the hopes and affections of his countrey, but the eyes and expectation of foreigners) after a few months, in the beginning of

*April*, deceaſed at *Ludlow Caſtle*, where he was ſent to keep his reſiance and court, as prince of *Wales*. Of this prince, in reſpect he died ſo young, and by reaſon of his father's manner of education, that did caſt no great luſtre upon his children, there is little particular memory: Only thus much remaineth, that he was very ſtudious and learned, beyond his years, and beyond the cuſtom of great princes.

THERE was a doubt ripped up in the times following, when the divorce of king *Henry* the eighth from the lady *Katharine* did ſo much buſy the world, whether *Arthur* was bedded with his lady or no, whereby that matter in fact (of carnal knowledge) might be made part of the caſe. And it is true, that the lady her ſelf denied it, or at leaſt her council ſtood upon it, and would not blanch that advantage, although the plenitude of the pope's power of diſpenſing was the main queſtion. And this doubt was kept long open, in reſpect of the two queens that ſucceeded, *Mary* and *Elizabeth*, whoſe legitimations were incompatible one with another, though their ſucceſſion was ſettled by act of parliament. And the times that favour'd queen *Mary*'s legitimation would have it believed, that there was no carnal knowledge between *Arthur* and *Katharine*. Not that they would ſeem to derogate from the pope's abſolute power, to diſpenſe even in that caſe; but only in point of honour, and to make the caſe more favourable and ſmooth: And the times that favoured queen *Elizabeth*'s legitimation, (which were the longer and the latter,) maintained the contrary. So much there remaineth in memory, that it was half a year's time between the creation of *Henry* prince of *Wales*, and prince *Arthur*'s death, which was conſtrued to be, for to expect a full time, whereby it might appear, whether the lady *Katharine* were with child by prince *Arthur*, or no. Again, the lady her ſelf procured a bull, for the better corroboration of the marriage, with a clauſe of *(vel forſan cognitam)* which was not in the firſt bull. There was given in evidence alſo, when the cauſe of the divorce was handled, a pleaſant paſſage, which was; that in a morning prince *Arthur*, upon his up-riſing from bed with her, called for drink, which he was not accuſtomed to do, and finding the gentleman of his chamber that brought him the drink to ſmile at it, and to note it, he ſaid merrily to him; that he had been in the midſt of *Spain*, which was an hot region, and his journey had made him dry; and that if the other had been in ſo hot a clime, he would have been dryer than he. Beſides, the prince was upon the point of ſixteen years of age when he died, and forward, and able in body.

THE *February* following, *Henry* duke of *York* was created prince of *Wales*, and earl of *Cheſter* and *Flint*: for the dukedom of *Cornwal* devolved to him by ſtatute. The king alſo being faſt handed, and loth to part with a ſecond dowry, but chiefly being affectionate both by his nature, and out of politick conſiderations to continue the alliance with *Spain*, prevailed with the prince (though not without ſome reluctation, ſuch as could be in thoſe years, for he was not twelve years of age) to be contracted with the princeſs *Katharine*. The ſecret providence of God ordaining that marriage to be the occaſion of great events and changes.

THE ſame year were the eſpouſals of *James* king of *Scotland* with the lady *Margaret*, the king's eldeſt daughter; which was done by proxy, and publiſhed at *Paul*'s croſs the five and twentieth of *January*, and *Te Deum* ſolemnly ſung. But certain it is, that the joy of the city thereupon ſhewed, by ringing of bells and bonfires, and ſuch other incenſe of the people, was more than could be expected, in a caſe of ſo great and freſh enmi-

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ty between the nations, eſpecially in *London*, which was far enough off from feeling any of the former calamities of the war: and therefore might be truly attributed to a ſecret inſtinct and inſpiring, (which many times runneth not only in the hearts of princes, but in the pulſe and veins of people,) touching the happineſs thereby to enſue in time to come. This marriage was in *Auguſt* following conſummated at *Edinborough*: the king bringing his daughter as far as *Colliweſton* on the way, and then conſigning her to the attendance of the earl of *Northumberland*; who with a great troop of lords and ladies of honour, brought her into *Scotland*, to the king her huſband.

This marriage had been in treaty by the ſpace of almoſt three years, from the time that the king of *Scotland* did firſt open his mind to biſhop *Fox*. The ſum given in marriage by the king, was ten thouſand pounds: and the jointure and advancement aſſured by the king of *Scotland*, was two thouſand pounds a year, after king *James* his death, and one thouſand pounds a year in preſent, for the lady's allowance or maintenance. This to be ſet forth in lands, of the beſt and moſt certain revenue. During the treaty, it is reported, that the king remitted the matter to his council; and that ſome of the table in the freedom of counſellors (the king being preſent) did put the caſe; that if God ſhould take the king's two ſons without iſſue, that then the kingdom of *England* would fall to the king of *Scotland*, which might prejudice the monarchy of *England*. Whereunto the king himſelf replied; that if that ſhould be, *Scotland* would be but an acceſſion to *England*, and not *England* to *Scotland*, for that the greater would draw the leſs: and that it was a ſafer union for *England*, than that of *France*. This paſſed as an oracle, and ſilenced thoſe that moved the queſtion.

The ſame year was fatal, as well for deaths as marriages, and that with equal temper. For the joys and feaſts of the two marriages, were compenſed with the mournings and funerals of prince *Arthur*, (of whom we have ſpoken) and of queen *Elizabeth*, who died in child-bed in the tower, and the child lived not long after. There died alſo that year ſir *Reginald Bray*, who was noted to have had with the king the greateſt freedom of any counſellor; but it was but a freedom the better to ſet off flattery. Yet he bare more than his juſt part of envy for the exactions.

At this time the king's eſtate was very proſperous, ſecured by the amity of *Scotland*, ſtrengthen'd by that of *Spain*, cheriſhed by that of *Burgundy*, all domeſtick troubles quenched, and all noiſe of war (like a thunder afar off) going upon *Italy*. Wherefore nature, which many times is happily contained and refrained by ſome bands of fortune, began to take place in the king; carrying (as with a ſtrong tide) his affections and thoughts unto the gathering and heaping up of treaſure. And as kings do more eaſily find inſtruments for their will and humour, than for their ſervice and honour; he had gotten for his purpoſe, or beyond his purpoſe, two inſtruments, *Empſon* and *Dudley*, (whom the people eſteemed as his horſe-leeches and ſhearers) bold men, and careleſs of fame, and that took toll of their maſter's griſt. *Dudley* was of a good family, eloquent, and one that could put hateful buſineſs into good language. But *Empſon*, that was the ſon of a ſieve-maker, triumphed always upon the deed done, putting off all other reſpects whatſoever. Theſe two perſons being lawyers in ſcience, and privy counſellors in authority, (as the corruption of the beſt things is the worſt) turned law and juſtice into wormwood and rapine. For firſt, their manner was to cauſe divers ſubjects to be indicted of ſundry crimes, and ſo

far forth to proceed in form of law; but when the bills were found, then preſently to commit them: And neverthelefs not to produce them in any reaſonable time to their anſwer, but to ſuffer them to languiſh long in priſon, and by ſundry artificial devices and terrors, to extort from them great fines and ranſoms, which they termed compoſitions and mitigations.

NEITHER did they (towards the end) obſerve ſo much as the half-face of juſtice, in proceeding by indictment; but ſent forth their precepts to attach men, and convent them before themſelves, and ſome others, at their private houſes, in a court of commiſſion; and there uſed to ſhuffle up a ſummary proceeding by examination, without tryal of jury; aſſuming to themſelves there, to deal both in pleas of the crown, and controverſies civil.

THEN did they alſo uſe to enthrall and charge the ſubjects lands with tenures *in capite*, by finding falſe offices, and thereby to work upon them for wardſhips, liveries, premier ſeiſins, and alienations, (being the fruits of thoſe tenures) refuſing upon divers pretexts and delays, to admit men to traverſe thoſe falſe offices, according to the law. Nay, the king's wards, after they had accompliſhed their full age, could not be ſuffered to have livery of their lands, without paying exceſſive fines, far exceeding all reaſonable rates. They did alſo vex men with informations of intruſion, upon ſcarce colourable titles.

WHEN men were outlawed in perſonal actions, they would not permit them to purchaſe their charters of pardon, except they paid great and intolerable ſums; ſtanding upon the ſtrict point of law, which upon outlawries giveth forfeiture of goods: nay, contrary to all law and colour, they maintained the king ought to have the half of mens lands and rents, during the ſpace of full two years, for a pain in caſe of outlawry. They would alſo ruffle with jurors, and enforce them to find as they would direct, and (if they did not) convent them, impriſon them, and fine them.

THESE and many other courſes, fitter to be buried than repeated, they had of preying upon the people; both like tame hawks for their maſter, and like wild hawks for themſelves; inſomuch as they grew to great riches and ſubſtance: but their principal working was upon penal laws, wherein they ſpared none, great nor ſmall; nor conſidered whether the law were poſſible or impoſſible, in uſe, or obſolete: but raked over all old and new ſtatutes, though many of them were made with intention rather of terror than of rigour, having ever a rabble of promoters, queſtmongers, and leading jurors at their command, ſo as they could have any thing found either for fact or valuation.

THERE remaineth to this day a report, that the king was on a time entertained by the earl of *Oxford* (that was his principal ſervant both for war and peace) nobly and ſumptuouſly, at his caſtle at *Henningham:* And at the king's going away, the earl's ſervants ſtood (in a ſeemly manner) in their livery coats, with cognizances, ranged on both ſides, and made the king a lane. The king called the earl to him, and ſaid, My lord, I have heard much of your hoſpitality, but I ſee it is greater than the ſpeech: Theſe handſome gentlemen and yeomen, which I ſee on both ſides of me, are ſure your menial ſervants. The earl ſmiled, and ſaid, it may pleaſe your grace, that were not for mine caſe: they are moſt of them my retainers, that are come to do me ſervice at ſuch a time as this, and chiefly to ſee your grace. The king ſtarted a little, and ſaid, By my faith, my lord,

I thank you for my good chear, but I may not endure to have my laws broken in my ſight: my attorney muſt ſpeak with you. And it is part of the report, that the earl compounded for no leſs than fifteen thouſand marks. And to ſhew farther the king's extreme diligence, I do remember to have ſeen long ſince, a book of accompt of *Empſon*'s, that had the king's hand almoſt to every leaf, by way of ſigning, and was in ſome places poſtilled in the margin, with the king's hand likewiſe, where was this remembrance:

ITEM. Received of ſuch a one five marks, for a pardon to be procured; and if the pardon do not paſs, the money to be repaid; except the party be ſome other ways ſatisfied.

And over againſt this *Memorandum* (of the king's own hand)

Otherwiſe ſatisfied.

Which I do the rather mention, becauſe it ſhews in the king a nearneſs, but yet with a kind of juſtneſs. So theſe little ſands and grains of gold and ſilver (as it ſeemeth) helped not a little to make up the great heap and bank.

BUT mean while (to keep the king awake) the earl of *Suffolk* having been too gay at prince *Arthur*'s marriage, and ſunk himſelf deep in debt, had yet once more a mind to be a knight-errant, and to ſeek adventures in foreign parts; and taking his brother with him, fled again into *Flanders*. That (no doubt) which gave him confidence, was the great murmur of the people againſt the king's government: and being a man of a light and raſh ſpirit, he thought every vapour would be a tempeſt. Neither wanted he ſome party within the kingdom: For the murmur of people awakes the diſcontents of nobles; and again, that calleth up commonly ſome head of ſedition. The king reſorting to his wonted and tried arts, cauſed ſir *Robert Curſon*, captain of the caſtle at *Hammes*, (being at that time beyond ſea, and therefore leſs likely to be wrought upon by the king) to fly from his charge, and to feign himſelf a ſervant of the earl's. This knight, having inſinuated himſelf into the ſecrets of the earl, and finding by him upon whom chiefly he had either hope or hold, advertiſed the king thereof in great ſecrecy: But nevertheleſs maintained his own credit and inward truſt with the earl. Upon whoſe advertiſements, the king attached *William Courtney* earl of *Devonſhire*, his brother-in-law, married to the lady *Katharine*, daughter to king *Edward* the fourth; *William de la Pole*, brother to the earl of *Suffolk*; ſir *James Tirrel*, and ſir *John Windham*, and ſome other meaner perſons, and committed them to cuſtody. *George* lord *Abergavenny*, and ſir *Thomas Green*, were at the ſame time apprehended; but as upon leſs ſuſpicion, ſo in a freer reſtraint, and were ſoon after delivered. The earl of *Devonſhire* being intereſſed in the blood of *York*, that was rather feared than nocent; yet as one that might be the object of others plots and deſigns, remained priſoner in the tower, during the king's life. *William de la Pole* was alſo long reſtrained, though not ſo ſtraitly. But for ſir *James Tirrel* (againſt whom the blood of the innocent princes, *Edward* the fifth, and his brother, did ſtill cry from under the altar) and ſir *John Windham*, and the other meaner ones, they were attainted and executed; the two knights beheaded. Nevertheleſs, to confirm the credit of *Curſon* (who belike had not yet done all his feats of activity) there was publiſhed at *Paul*'s croſs, about the time of the ſaid executions, the pope's bull of excommunication

communication and curſe, againſt the earl of *Suffolk* and ſir *Robert Curſon*, and ſome others by name; and likewiſe in general againſt all the abettors of the ſaid earl: wherein it muſt be confeſſed, that heaven was made too much to bow to earth, and religion to policy. But ſoon after *Curſon* (when he ſaw time) returned into *England*, and withal into wonted favour with the king, but worſe fame with the people. Upon whoſe return the earl was much diſmayed, and ſeeing himſelf deſtitute of hopes (the lady *Margaret* alſo by tract of time, and bad ſucceſs, being now become cool in thoſe attempts) after ſome wandering in *France* and *Germany*, and certain little projects, no better than ſquibs of an exiled man, being tired out, retired again into the protection of the arch-duke *Philip* in *Flanders*, who by the death of *Iſabella*, was at that time king of *Caſtile*, in the right of *Joan* his wife.

THIS year (being the nineteenth of his reign) the king called his parliament: wherein a man may eaſily gueſs how abſolute the king took himſelf to be with his parliament, when *Dudley* that was ſo hateful was made ſpeaker of the houſe of commons. In this parliament there were not made any ſtatutes memorable touching publick government. But thoſe that were, had ſtill the ſtamp of the king's wiſdom and policy.

THERE was a ſtatute made for the diſannulling of all patents of leaſe or grant, to ſuch as came not upon lawful ſummons to ſerve the king in his wars, againſt the enemies or rebels, or that ſhould depart without the king's licence; with an exception of ſeveral perſons of the long robe: Providing nevertheleſs, that they ſhould have the king's wages from their houſe, till their return home again. There hath been the like made before for offices, and by this ſtatute it was extended to lands. But a man may eaſily ſee by many ſtatutes made in the king's time, that the king thought it ſafeſt to aſſiſt martial law, by law of parliament.

ANOTHER ſtatute was made, prohibiting the bringing in of manufactures of ſilk wrought by it ſelf, or mixt with any other thread. But it was not of ſtuffs of whole piece (for that the realm had of them no manufacture in uſe at that time) but of knit ſilk, or texture of ſilk; as ribbands, laces, cauls, points and girdles, *&c.* which the people of *England* could then well ſkill to make. This law pointed at a true principle; that where foreign materials are but ſuperfluities, foreign manufactures ſhould be prohibited. For that will either baniſh the ſuperfluity, or gain the manufacture.

THERE was a law alſo of reſumption of patents of goals, and the reannexing of them to the ſheriffwicks; privileged officers being no leſs an interruption of juſtice, than privileged places.

THERE was likewiſe a law to reſtrain the by-laws, or ordinances of corporations, which many times were againſt the prerogative of the king, the common law of the realm, and the liberty of the ſubject, being fraternities in evil. It was therefore provided, that they ſhould not be put in execution, without the allowance of the chancellor, treaſurer, and the two chief juſtices, or three of them, or of the two juſtices of circuit where the corporation was.

ANOTHER law was (in effect) to bring in the ſilver of the realm to the mint, in making all clipped, miniſhed, or impaired coins of ſilver, not to be current in payments; without giving any remedy of weight, but with an exception only of reaſonable wearing, which was as nothing in reſpect of the uncertainty; and ſo (upon the matter) to ſet the mint on work, and to give way to new coins of ſilver, which ſhould be then minted.

THERE likewiſe was a long ſtatute againſt vagabonds, wherein two things may be noted; the one, the diſlike the parliament had of goaling of them, as that which was chargeable, peſterous, and of no open example. The other, that in the ſtatutes of this king's time, (for this of the nineteenth year is not the only ſtatute of that kind) there are ever coupled the puniſhment of vagabonds, and the forbidding of dice and cards, and unlawful games, unto ſervants and mean people, and the putting down and ſuppreſſing of alehouſes, as ſtrings of one root together, and as if the one were unprofitable without the other.

AS for riot and retainers, there paſſed ſcarce any parliament in this time without a law againſt them; the king ever having an eye to might and multitude.

THERE was granted alſo that parliament a ſubſidy, both from the temporalty and the clergy. And yet nevertheleſs, ere the year expired, there went out commiſſions for a general benevolence, though there were no wars, no fears. The ſame year the city gave five thouſand marks, for confirmation of their liberties; a thing fitter for the beginnings of kings reigns, than the latter ends. Neither was it a ſmall matter that the mint gained upon the late ſtatute, by the recoinage of groats and half-groats, now twelvepences and ſix-pences. As for *Empſon* and *Dudley*'s mills, they did grind more than ever: So that it was a ſtrange thing to ſee what golden ſhowers poured down upon the king's treaſury at once. The laſt payments of the marriage-money from *Spain*; the ſubſidy; the benevolence; the recoinage; the redemption of the city's liberties; the caſualties: And this is the more to be marvelled at, becauſe the king had then no occaſions at all of wars or troubles. He had now but one ſon, and one daughter unbeſtowed. He was wiſe; he was of an high mind; he needed not to make riches his glory; he did excel in ſo many things elſe; ſave that certainly avarice doth ever find in it ſelf matter of ambition. Belike he thought to leave his ſon ſuch a kingdom, and ſuch a maſs of treaſure, as he might chuſe his greatneſs where he would.

THIS year was alſo kept the ſerjeant's feaſt, which was the ſecond call in this king's days.

ABOUT this time, *Iſabella* queen of *Caſtile* deceaſed; a right noble lady, and an honour to her ſex and times, and the corner-ſtone of the greatneſs of *Spain* that hath followed. This accident the king took not for news at large, but thought it had a great relation to his own affairs; eſpecially in two points: the one for example, the other for conſequence. Firſt, he conceived that the caſe of *Ferdinando* of *Aragon*, after the death of queen *Iſabella*, was his own caſe after the death of his own queen; and the caſe of *Joan* the heir unto *Caſtile*, was the caſe of his own ſon prince *Henry*. For if both of the kings had their kingdoms in the right of their wives, they deſcended to the heirs, and did not accrue to the huſbands. And although his own caſe had both ſteel and parchment, more than the other (that is to ſay, a conqueſt in the field, and an act of parliament) yet notwithſtanding that natural title of deſcent in blood, did (in the imagination even of a wiſe man) breed a doubt, that the other two were not ſafe nor ſufficient. Wherefore he was wonderful diligent to enquire and obſerve what became of the king of *Aragon*, in holding and continuing the kingdom of *Caſtile*; and whether he did hold it in his own right; or as adminiſtrator to his daughter; and whether he were like to hold it in fact, or to be put out by his ſon in law. Secondly, he did revolve in his mind, that the ſtate of *Chriſtendom* might

might by this late accident have a turn. For whereas before time, himſelf, with the conjunction of *Aragon* and *Caſtile*, (which then was one) and the amity of *Maximilian* and *Philip* his ſon the arch-duke, was far too ſtrong a party for *France*; he began to fear, that now the *French* king (who had great intereſt in the affections of *Philip* the young king of *Caſtile)* and *Philip* himſelf, now king of *Caſtile*, (who was in ill terms with his father-in-law about the preſent government of *Caſtile:)* And thirdly, *Maximilian Philip*'s father (who was ever variable, and upon whom the ſureſt aim that could be taken was, that he would not be long as he had been laſt before) would, all three being potent princes, enter into ſome ſtrait league and confederation amongſt themſelves: whereby though he ſhould not be endangered, yet he ſhould be left to the poor amity of *Aragon*. And whereas he had been heretofore a kind of arbiter of *Europe*, he ſhould now go leſs, and be over-topped by ſo great a conjunction. He had alſo (as it ſeems) an inclination to marry, and bethought him of ſome fit conditions abroad: and amongſt others he had heard of the beauty and virtuous behaviour of the young queen of *Naples*, the widow of *Ferdinando* the younger, being then of matronal years of ſeven and twenty: By whoſe marriage he thought that the kingdom of *Naples* (having been a goal for a time between the king of *Aragon*, and the *French* king, and being but newly ſettled) might in ſome part be depoſited in his hands, who was ſo able to keep the ſtakes. Therefore he ſent in embaſſage or meſſage, three confident perſons, *Francis Marſin*, *James Braybrooke*, and *John Stile*, upon two ſeveral inquiſitions rather than negotiations. The one touching the perſon and condition of the young queen of *Naples*. The other touching all particulars of eſtate, that concerned the fortunes and intentions of *Ferdinando*. And becauſe they may obſerve beſt, who themſelves are obſerved leaſt, he ſent them under colourable pretexts; giving them letters of kindneſs and compliment from *Katharine* the princeſs, to her aunt and niece, the old and young queen of *Naples*, and delivering to them alſo a book of new articles of peace; which notwithſtanding it had been delivered unto doctor *de Puebla*, the lieger ambaſſador of *Spain* here in *England*, to be ſent; yet for that the king had been long without hearing from *Spain*, he thought good thoſe meſſengers, when they had been with the two queens, ſhould likewiſe paſs on to the court of *Ferdinando*, and take a copy of the book with them. The inſtructions touching the queen of *Naples*, were ſo curious and exquiſite, being as articles whereby to direct a ſurvey, or framing a particular of her perſon, for complexion, favour, feature, ſtature, health, age, cuſtoms, behaviour, conditions, and eſtate, as if the king had been young, a man would have judged him to be amorous; but being ancient, it ought to be interpreted, that ſure he was very chaſte, for that he meant to find all things in one woman, and ſo to ſettle his affections without ranging. But in this match he was ſoon cooled, when he heard from his embaſſadors, that this young queen had had a goodly jointure in the realm of *Naples*, well anſwered during the time of her uncle *Frederick*; yea, and during the time of *Lewis* the *French* king, in whoſe diviſion her revenue fell; but ſince the time that the kingdom was in *Ferdinando*'s hands, all was aſſigned to the army and garriſons there, and ſhe received only a penſion or exhibition out of his coffers.

THE other part of the enquiry had a grave and diligent return, informing the king at full of the preſent ſtate of king *Ferdinando*. By this report it appeared to the king, that *Ferdinando* did continue the government of *Caſtile*

*Caſtile*, as adminiſtrator unto his daughter *Joan*, by the title of queen *Iſabella*'s will, and partly by the cuſtom of the kingdom, as he pretended. And that all mandates and grants were expedited in the name of *Joan* his daughter, and himſelf as adminiſtrator, without mention of *Philip* her huſband. And that king *Ferdinando*, howſoever he did diſmiſs himſelf of the name of king of *Caſtile*, yet meant to hold the kingdom without account, and in abſolute command.

It appeareth alſo, that he flattered himſelf with hopes, that king *Philip* would permit unto him the government of *Caſtile* during his life; which he had laid his plot to work him unto, both by ſome counſellors of his about him, which *Ferdinando* had at his devotion, and chiefly by promiſe, that in caſe *Philip* gave not way unto it, he would marry ſome young lady, whereby to put him by the ſucceſſion of *Aragon* and *Granada*, in caſe he ſhould have a ſon. And laſtly, by repreſenting unto him that the government of the *Burgundians*, till *Philip* were by continuance in *Spain*, made as natural of *Spain*, would not be endured by the *Spaniards*. But in all thoſe things (though wiſely laid down and conſidered) *Ferdinando* failed; but that *Pluto* was better to him than *Pallas*.

In the ſame report alſo, the embaſſadors being mean men, and therefore the more free, did ſtrike upon a ſtring which was ſomewhat dangerous. For they declared plainly, that the people of *Spain*, both nobles and commons, were better affected unto the part of *Philip*, (ſo he brought his wife with him) than to *Ferdinando*; and expreſſed the reaſon to be, becauſe he had impoſed upon them many taxes and tallages, which was the king's own caſe between him and his ſon.

There was alſo in this report a declaration of an overture of marriage, which *Amaſon* the ſecretary of *Ferdinando* had made unto the embaſſadors in great ſecret, between *Charles* prince of *Caſtile*, and *Mary* the king's ſecond daughter; aſſuring the king, that the treaty of marriage then on foot for the ſaid prince and the daughter of *France*, would break: and that ſhe the ſaid daughter of *France*, ſhould be married to *Angoleſme*, that was the heir apparent of *France*.

There was a touch alſo of a ſpeech of marriage between *Ferdinando* and madam *de Fois*, a lady of the blood of *France*, which afterwards indeed ſucceeded. But this was reported as learned in *France*, and ſilenced in *Spain*.

The king by the return of this embaſſage, which gave great light unto his affairs, was well inſtructed, and prepared how to carry himſelf between *Ferdinando* king of *Aragon*, and *Philip* his ſon in law, king of *Caſtile*; reſolving with himſelf to do all that in him lay, to keep them at one within themſelves; but howſoever that ſucceeded, by a moderate carriage, and bearing the perſon of a common friend, to loſe neither of their friendſhips; but yet to run a courſe more entire with the king of *Aragon*, but more laboured and officious with the king of *Caſtile*. But he was much taken with the overture of marriage with his daughter *Mary*; both becauſe it was the greateſt marriage of *Chriſtendom*, and for that it took hold of both allies.

But to corroborate his alliance with *Philip*, the winds gave him an interview: for *Philip* chuſing the winter ſeaſon, the better to ſurprize the king of *Aragon*, ſet forth with a great navy out of *Flanders* for *Spain*, in the month of *January*, the one and twentieth year of the king's reign. But himſelf was ſurprized with a cruel tempeſt, that ſcattered his ſhips upon

the ſeveral coaſts of *England*. And the ſhip wherein the king and queen were (with two other ſmall barks only) torn, and in great peril to eſcape the fury of the weather, thruſt into *Weymouth*. King *Philip* himſelf, having not been uſed (as it ſeems) to ſea, all wearied and extream ſick, would needs land to refreſh his ſpirits, though it was againſt the opinion of his council, doubting it might breed delay, his occaſions requiring celerity.

The rumour of the arrival of a puiſſant navy upon the coaſt, made the countrey arm. And ſir *Thomas Trenchard*, with forces ſuddenly raiſed, not knowing what the matter might be, came to *Weymouth*. Where underſtanding the accident, he did in all humbleneſs and humanity invite the king and queen to his houſe; and forthwith diſpatched poſts to the court. Soon after came ſir *John Carew* likewiſe, with a great troop of men well armed; uſing the like humbleneſs and reſpects towards the king, when he knew the caſe. King *Philip* doubting that they, being but ſubjects, durſt not let him paſs away again without the king's notice and leave, yielded to their entreaties to ſtay till they heard from the court. The king, as ſoon as he heard the news, commanded preſently the earl of *Arundel* to go to viſit the king of *Caſtile*, and let him underſtand that as he was very ſorry for his miſhap, ſo he was glad that he had eſcaped the danger of the ſeas, and likewiſe of the occaſion himſelf had to do him honour; and deſiring him to think himſelf as in his own land; and that the king made all haſte poſſible to come and embrace him. The earl came to him in great magnificence, with a brave troop of three hundred horſe; and (for more ſtate) came by torch-light. After he had done the king's meſſage, king *Philip* ſeeing how the world went, the ſooner to get away, went upon ſpeed to the king at *Windſor*, and his queen followed by eaſy journeys. The two kings at their meeting, uſed all the careſſes and loving demonſtrations that were poſſible. And the king of *Caſtile* ſaid pleaſantly to the king, that he was now puniſhed, for that he would not come within his walled town of *Calais* when they met laſt. But the king anſwered, that walls and ſeas were nothing where hearts were open; and that he was here no otherwiſe but to be ſerved. After a day or two's refreſhing, the kings entred into ſpeech of renewing the treaty; the king ſaying, that though king *Philip*'s perſon were the ſame, yet his fortunes and ſtate were raiſed: in which caſe a renovation of treaty was uſed amongſt princes. But while theſe things were in handling, the king chuſing a fit time, and drawing the king of *Caſtile* into a room, where they two only were private, and laying his hand civilly upon his arm, and changing his countenance a little from a countenance of entertainment, ſaid to him, Sir, you have been ſaved upon my coaſt, I hope you will not ſuffer me to wrack upon yours. The king of *Caſtile* aſked him, what he meant by that ſpeech? I mean it (ſaith the king) by that ſame harebrain wild fellow, my ſubject, the earl of *Suffolk*, who is protected in your countrey, and begins to play the fool, when all others are weary of it. The king of *Caſtile* anſwered, I had thought (ſir) your felicity had been above thoſe thoughts: but if it trouble you I will baniſh him. The king replied, thoſe hornets were beſt in their neſt, and worſt then when they did fly abroad; and that his deſire was to have him delivered to him. The king of *Caſtile* herewith a little confuſed, and in a ſtudy, ſaid, that can I not do with my honour, and leſs with yours; for you will be thought to have uſed me as a priſoner. The king preſently ſaid, then the matter is at an end: for I will take that diſhonour upon me, and ſo your honour is ſaved. The king of *Caſtile*, who had the king in great eſtimation,

tion, and beſides remembred where he was, and knew not what uſe he might have of the king's amity, for that himſelf was new in his eſtate of *Spain*, and unſettled both with his father in law, and with his people, compoſing his countenance, ſaid, Sir, you give law to me, but ſo will I to you. You ſhall have him, but (upon your honour) you ſhall not take his life. The king embracing him, ſaid, agreed. Saith the king of *Caſtile*, neither ſhall it diſlike you, if I ſend to him in ſuch a faſhion, as he may partly come with his own good will. The king ſaid, it was well thought of; and if it pleaſed him, he would join with him, in ſending to the earl a meſſage to that purpoſe. They both ſent ſeverally, and mean while they continued feaſting and paſtimes. The king being (on his part) willing to have the earl ſure before the king of *Caſtile* went; and the king of *Caſtile* being as willing to ſeem to be enforced. The king alſo, with many wiſe and excellent perſuaſions, did adviſe the king of *Caſtile*, to be ruled by the counſel of his father in law *Ferdinando*; a prince ſo prudent, ſo experienced, ſo fortunate. The king of *Caſtile* (who was in no very good terms with his ſaid father in law) anſwered, that if his father in law would ſuffer him to govern his kingdoms, he ſhould govern him.

THERE were immediately meſſengers ſent from both kings, to recall the earl of *Suffolk*; who upon gentle words uſed to him was ſoon charmed, and willing enough to return; aſſured of his life, and hoping of his liberty. He was brought through *Flanders* to *Calais*, and thence landed at *Dover*, and with ſufficient guard delivered and received at the tower of *London*. Mean while king *Henry* (to draw out the time) continued his feaſtings and entertainments, and after he had received the king of *Caſtile* into the fraternity of the garter, and for a reciprocal had his ſon the prince admitted to the order of the golden fleece, he accompanied king *Philip* and his queen to the city of *London*; where they were entertained with the greateſt magnificence and triumph, that could be upon no greater warning. And as ſoon as the earl of *Suffolk* had been conveyed to the tower, (which was the ſerious part) the jollities had an end, and the kings took leave. Nevertheleſs during their being here, they in ſubſtance concluded that treaty, which the *Flemings* term *intercurſus malus*, and bears date at *Windſor*; for that there be ſome things in it, more to the advantage of the *Engliſh*, than of them; eſpecially, for that the free-fiſhing of the *Dutch* upon the coaſts and ſeas of *England*, granted in the treaty of *undecimo*, was not by this treaty confirmed. All articles that confirm former treaties being preciſely and warily limited and confirmed to matter of commerce only, and not otherwiſe.

IT was obſerved, that the great tempeſt which drove *Philip* into *England*, blew down the golden eagle from the ſpire of *Paul*'s, and in the fall it fell upon a ſign of the black eagle, which was in *Paul*'s church-yard, in the place where the ſchool-houſe now ſtandeth, and batter'd it, and brake it down: which was a ſtrange ſtooping of a hawk upon a fowl. This the people interpreted to be an ominous prognoſtick upon the imperial houſe, which was (by interpretation alſo) fulfilled upon *Philip* the emperor's ſon, not only in the preſent diſaſter of the tempeſt, but in that that followed. For *Philip* arriving into *Spain*, and attaining the poſſeſſion of the kingdom of *Caſtile* without reſiſtance, (inſomuch as *Ferdinando*, who had ſpoke ſo great before, was with difficulty admitted to the ſpeech of his ſon in law) ſicken'd ſoon after, and deceaſed. Yet after ſuch time, as there was an obſervation by the wiſeſt of that court, that if he had lived, his father would have

gained upon him in that ſort, as he would have governed his councils and deſigns, if not his affections. By this all *Spain* returned into the power of *Ferdinando* in ſtate as it was before; the rather, in regard of the infirmity of *Joan* his daughter, who loving her huſband (by whom ſhe had many children) dearly well, and no leſs beloved of him, (howſoever her father to make *Philip* ill-beloved of the people of *Spain*, gave out that *Philip* uſed her not well) was unable in ſtrength of mind to bear the grief of his deceaſe, and fell diſtracted of her wits. Of which malady her father was thought no ways to endeavour the cure, the better to hold his regal power in *Caſtile*. So that as the felicity of *Charles* the eighth was ſaid to be a dream; ſo the adverſity of *Ferdinando* was ſaid likewiſe to be a dream, it paſſed over ſo ſoon.

About this time the king was deſirous to bring into the houſe of *Lancaſter* celeſtial honour, and became ſuitor to pope *Julius*, to canonize king *Henry* the ſixth for a ſaint; the rather, in reſpect of that his famous prediction of the king's own aſſumption to the crown. *Julius* referred the matter (as the manner is) to certain cardinals, to take the verification of his holy acts and miracles: but it died under the reference. The general opinion was, that pope *Julius* was too dear, and that the king would not come to his rates. But it is more probable, that the pope (who was extremely jealous of the dignity of the ſee of *Rome*, and of the acts thereof) knowing that king *Henry* the ſixth was reputed in the world abroad but for a ſimple man, was afraid it would but diminiſh the eſtimation of that kind of honour, if there were not a diſtance kept between *Innocents* and ſaints.

The ſame year likewiſe there proceeded a treaty of marriage between the king and lady *Margaret* ducheſs dowager of *Savoy*, only daughter to *Maximilian*, and ſiſter to the king of *Caſtile*; a lady wiſe, and of great good fame. This matter had been in ſpeech between the two kings at their meeting, but was ſoon after reſumed; and therein was employed for his firſt piece the king's then chaplain, and after the great prelate *Thomas Wolſey*. It was in the end concluded, with great and ample conditions for the king, but with promiſe *de futuro* only. It may be the king was the rather induced unto it, for that he heard more and more of the marriage to go on between his great friend and ally *Ferdinando* of *Aragon*, and madam *de Fois*, whereby that king began to piece with the *French* king, from whom he had been always before ſevered. So fatal a thing it is, for the greateſt and ſtraiteſt amities of kings, at one time or other to have a little of the wheel: nay, there is a farther tradition (in *Spain*, though not with us) that the king of *Aragon*, after he knew that the marriage between *Charles*, the young prince of *Caſtile*, and *Mary* the king's ſecond daughter went roundly on; (which though it was firſt moved by the king of *Aragon*, yet it was afterwards wholly advanced and brought to perfection by *Maximilian*, and the friends on that ſide,) enter'd into a jealouſy, that the king did aſpire to the government of *Caſtilia*, as adminiſtrator during the minority of his ſon in law; as if there ſhould have been a competition of three for that government; *Ferdinando*, grandfather on the mother's ſide; *Maximilian*, grandfather on the father's ſide; and king *Henry*, father in law to the young prince. Certainly it is not unlike, but the king's government (carrying the young prince with him) would have been perhaps more welcome to the *Spaniards*, than that of the other two. For the nobility of *Caſtilia*, that ſo lately put out the king of *Aragon* in favour of king *Philip*, and had diſcovered themſelves ſo far, could not be but in a ſecret diſtruſt and diſtaſte of that king. And as for

*Maximilian*,

*Maximilian*, upon twenty reſpects he could not have been the man. But this purpoſe of the king's ſeemeth to me (conſidering the king's ſafe courſes, never found to be enterprizing or adventurous) not greatly probable, except he ſhould have had a deſire to breathe warmer, becauſe he had ill lungs. This marriage with *Margaret* was protracted from time to time, in reſpect of the infirmity of the king, who now in the two and twentieth of his reign began to be troubled with the gout: but the defluxion taking alſo into his breaſt, waſted his lungs, ſo that thrice in a year, (in a kind of return, and eſpecially in the ſpring,) he had great fits and labours of the phthiſick: nevertheleſs, he continued to intend buſineſs with as great diligence, as before in his health: yet ſo, as upon this warning, he did likewiſe now more ſeriouſly think of the world to come, and of making himſelf a ſaint, as well as king *Henry* the ſixth; by treaſure better employed, than to be given to pope *Julius*: for this year he gave greater alms than accuſtomed, and diſcharged all priſoners about the city, that lay for fees or debts under forty ſhillings. He did alſo make haſte with religious foundations; and in the year following (which was the three and twentieth) finiſhed that of the *Savoy*. And hearing alſo of the bitter cries of his people againſt the oppreſſions of *Dudley* and *Empſon*, and their complices; partly by devout perſons about him, and partly by publick ſermons, (the preachers doing their duty therein,) he was touched with great remorſe for the ſame. Nevertheleſs *Empſon* and *Dudley*, though they could not but hear of theſe ſcruples in the king's conſcience; yet, as if the king's ſoul and his money were in ſeveral offices, that the one was not to intermeddle with the other, went on with as great rage as ever. For the ſame three and twentieth year was there a ſharp proſecution againſt ſir *William Capel* now the ſecond time; and this was for matters of miſgovernment in his mayoralty: The great matter being, that in ſome payments he had taken knowledge of falſe moneys, and did not his diligence to examine and beat it out, who were the offenders. For this and ſome other things laid to his charge, he was condemned to pay two thouſand pounds; and being a man of ſtomach, and harden'd by his former troubles, refuſed to pay a mite; and belike uſed ſome untoward ſpeeches of the proceedings, for which he was ſent to the tower, and there remained till the king's death. *Kneſworth* likewiſe, that had been lately mayor of *London*, and both his ſheriffs, were for abuſes in their offices queſtioned, and impriſoned, and delivered, upon one thouſand four hundred pounds paid. *Hawis*, an alderman of *London*, was put in trouble, and died with thought and anguiſh, before his buſineſs came to an end. Sir *Lawrence Ailmer*, who had likewiſe been mayor of *London*, and his two ſheriffs, were put to the fine of one thouſand pounds. And ſir *Lawrence*, for refuſing to make payment, was committed to priſon, where he ſtayed till *Empſon* himſelf was committed in his place.

It is no marvail (if the faults were ſo light and the rates ſo heavy) that the king's treaſure of ſtore, that he left at his death, moſt of it in ſecret places, under his own key and keeping, at *Richmond*, amounted (as by tradition it is reported to have done) unto the ſum of near eighteen hundred thouſand pounds ſterling; a huge maſs of money even for theſe times.

The laſt act of ſtate that concluded this king's temporal felicity, was the concluſion of a glorious match between his daughter *Mary*, and *Charles* prince of *Caſtile*, afterwards the great emperor, both being of tender years: which treaty was perfected by biſhop *Fox*, and other his commiſſioners at *Calais*,

*Calais*, the year before the king's death. In which alliance, it ſeemeth, he himſelf took ſo high contentment, as in a letter which he wrote thereupon to the city of *London*, (commanding all poſſible demonſtrations of joy to be made for the ſame) he expreſſeth himſelf, as if he thought he had built a wall of braſs about his kingdom: when he had for his ſons-in-law, a king of *Scotland*, and a prince of *Caſtile* and *Burgundy*. So as now there was nothing to be added to this great king's felicity, being at the top of all worldly bliſs, (in regard of the high marriages of his children, his great renown throughout *Europe*, and his ſcarce credible riches, and the perpetual conſtancy of his proſperous ſucceſſes,) but an opportune death, to withdraw him from any future blow of fortune: which certainly (in regard of the great hatred of his people, and the title of his ſon, being then come to eighteen years of age, and being a bold prince, and liberal, and that gained upon the people by his very aſpect and preſence) had not been impoſſible to have come upon him.

To crown alſo the laſt year of his reign, as well as his firſt, he did an act of piety, rare, and worthy to be taken into imitation. For he granted forth a general pardon: as expecting a ſecond coronation in a better kingdom. He did alſo declare in his will, that his mind was, that reſtitution ſhould be made of thoſe ſums which had been unjuſtly taken by his officers.

And thus this *Solomon* of *England* (for *Solomon* alſo was too heavy upon his people in exactions) having lived two and fifty years, and thereof reigned three and twenty years, and eight months, being in perfect memory, and in a moſt bleſſed mind, in a great calm of a conſuming ſickneſs paſſed to a better world, the two and twentieth of *April* 1508, at his palace of *Richmond*, which himſelf had built.

This king (to ſpeak of him in terms equal to his deſerving) was one of the beſt ſort of wonders; a wonder for wiſe men. He had parts (both in his virtues and his fortune) not ſo fit for a common place, as for obſervation. Certainly he was religious, both in his affection and obſervance. But as he could ſee clear (for thoſe times) through ſuperſtition, ſo he would be blinded (now and then) by human policy. He advanced Church-men; he was tender in the privilege of ſanctuaries, though they wrought him much miſchief. He built and endowed many religious foundations, beſides his memorable hoſpital of the *Savoy*: And yet was he a great alms-giver in ſecret; which ſhewed, that his works in publick were dedicated rather to God's glory, than his own. He profeſſed always to love and ſeek peace; and it was his uſual preface in his treaties; that when *Chriſt* came into the world, peace was ſung; and when he went out of the world, peace was bequeathed. And this virtue could not proceed out of fear, or ſoftneſs; for he was valiant and active, and therefore (no doubt) it was truly Chriſtian and moral. Yet he knew the way to peace was not to ſeem to be deſirous to avoid wars: therefore would he make offers and fames of wars, till he had mended the conditions of peace. It was alſo much, that one that was ſo great a lover of peace, ſhould be ſo happy in war. For his arms (either in foreign or civil wars) were never unfortunate; neither did he know what a diſaſter meant. The war of his coming in, and the rebellions of the earl of *Lincoln*, and the lord *Awdley*, were ended by victory. The wars of *France* and *Scotland*, by peaces ſought at his hands. That of *Britain*, by accident of the duke's death. The inſurrection of the lord *Lovel*, and that of

of *Perkin* at *Exeter*, and in *Kent*, by flight of the rebels, before they came to blows: ſo that his fortune of arms was ſtill inviolate: the rather ſure, for that in the quenching of the commotions of his ſubjects, he ever went in perſon: Sometimes reſerving himſelf to back and ſecond his lieutenants, but ever in action; and yet that was not merely forwardneſs, but partly diſtruſt of others.

He did much maintain and countenance his laws; which (nevertheleſs) was no impediment to him to work his will: for it was ſo handled, that neither prerogative, nor profit went to diminution. And yet as he would ſometimes ſtrain up his laws to his prerogative, ſo would he alſo let down his prerogative to his parliament. For mint, and wars, and martial diſcipline, (things of abſolute power) he would nevertheleſs bring to parliament. Juſtice was well adminiſtred in his time, ſave where the king was party: ſave alſo, that the council-table intermeddled too much with *meum* and *tuum*. For it was a very court of juſtice during his time, eſpecially in the beginning: but in that part both of juſtice and policy, which is the durable part, and cut (as it were) in braſs or marble (which is the making of good laws) he did excel. And with his juſtice, he was alſo a merciful prince: as in whoſe time, there were but three of the nobility that ſuffered; the earl of *Warwick*, the lord chamberlain, and the lord *Awdley*: though the firſt two were inſtead of numbers, in the diſlike and obloquy of the people. But there were never ſo great rebellions, expiated with ſo little blood, drawn by the hand of juſtice, as the two rebellions of *Blackheath* and *Exeter*. As for the ſeverity uſed upon thoſe which were taken in *Kent*, it was but upon a ſcum of the people. His pardons went ever both before and after his ſword. But then he had withal a ſtrange kind of interchanging of large and inexpected pardons, with ſevere executions: which (his wiſdom conſidered) could not be imputed to any inconſtancy or inequality; but either to ſome reaſon which we do not now know, or to a principle he had ſet unto himſelf, that he would vary, and try both ways in turn: but the leſs blood he drew, the more he took of treaſure. And (as ſome conſtrued it) he was the more ſparing in the one, that he might be the more preſſing in the other; for both would have been intolerable. Of nature aſſuredly he coveted to accumulate treaſure, and was a little poor in admiring riches. The people (into whom there is infuſed, for the preſervation of monarchies, a natural deſire to diſcharge their princes, though it be with the unjuſt charge of their counſellors and miniſters) did impute this unto cardinal *Morton*, and ſir *Reginald Bray*: who (as it after appeared) as counſellors of ancient authority with him, did ſo ſecond his humours, as nevertheleſs they did temper them. Whereas *Empſon*, and *Dudley* that followed, being perſons that had no reputation with him, (otherwiſe than by the ſervile following of his bent) did not give way only (as the firſt did) but ſhape him way to thoſe extremities, for which himſelf was touched with remorſe at his death, and which his ſucceſſor renounced, and ſought to purge. This exceſs of his, had at that time many gloſſes and interpretations. Some thought the continual rebellions wherewith he had been vexed, had made him grow to hate his people: ſome thought it was done to pull down their ſtomachs, and to keep them low: ſome, for that he would leave his ſon a golden fleece: ſome ſuſpected he had ſome high deſign upon foreign parts: but thoſe perhaps ſhall come neareſt the truth, that fetch not their reaſons ſo far off; but rather impute it to nature, age, peace, and a mind fixed upon no other ambition or purſuit. Whereunto I ſhould add, that having every

every day occaſion to take notice of the neceſſities and ſhifts for money of other great princes abroad, it did the better (by compariſon) ſet off to him the felicity of full coffers. As to his expending of treaſure, he never ſpared charge which his affairs required; and in his buildings was magnificent, but his rewards were very limited: ſo that his liberality was rather upon his own ſtate and memory, than upon the deſerts of others.

He was of an high mind, and loved his own will, and his own way; as one that revered himſelf, and would reign indeed. Had he been a private man, he would have been termed proud. But in a wiſe prince, it was but keeping of diſtance, which indeed he did towards all; not admitting any near or full approach, either to his power, or to his ſecrets: for he was governed by none. His queen (notwithſtanding ſhe had preſented him with divers children, and with a crown alſo, though he would not acknowledge it) could do nothing with him. His mother he reverenced much, heard little. For any perſon agreeable to him for ſociety (ſuch as was *Haſtings* to king *Edward* the fourth, or *Charles Brandon* after to king *Henry* the eighth) he had none: except we ſhould account for ſuch perſons, *Fox*, and *Bray*, and *Empſon*, becauſe they were ſo much with him: but it was but as the inſtrument is much with the workman. He had nothing in him of vain-glory, but yet kept ſtate and majeſty to the height; being ſenſible, that majeſty maketh the people bow, but vain-glory boweth to them.

To his confederates abroad he was conſtant and juſt, but not open. But rather, ſuch was his enquiry, and ſuch his cloſeneſs, as they ſtood in the light towards him, and he ſtood in the dark to them. Yet without ſtrangeneſs, but with a ſemblance of mutual communication of affairs. As for little envies, or emulations upon foreign princes (which are frequent with many kings) he had never any; but went ſubſtantially to his own buſineſs. Certain it is, that though his reputation was great at home, yet it was greater abroad. For foreigners that could not ſee the paſſages of affairs, but made their judgments upon the iſſues of them, noted that he was ever in ſtrife, and ever aloft. It grew alſo from the airs which the princes and ſtates abroad received from their embaſſadors and agents here; which were attending the court in great number: whom he did not only content with courteſy, reward, and privateneſs; but (upon ſuch conferences as paſſed with them) put them in admiration, to find his univerſal inſight into the affairs of the world: which though he did ſuck chiefly from themſelves, yet that which he had gathered from them all, ſeemed admirable to every one. So that they did write ever to their ſuperiours in high terms, concerning his wiſdom and art of rule: nay, when they were returned, they did commonly maintain intelligence with him. Such a dexterity he had to impropriate to himſelf all foreign inſtruments.

He was careful and liberal to obtain good intelligence from all parts abroad: wherein he did not only uſe his intereſt in the liegers here, and his penſioners which he had both in the court of *Rome*, and other the courts of *Chriſtendom*; but the induſtry and vigilance of his own embaſſadors in foreign parts. For which purpoſe his inſtructions were ever extream curious and articulate; and in them more articles touching inquiſition, than touching negotiation. Requiring likewiſe from his embaſſadors, an anſwer in particular diſtinct articles, reſpectively to his queſtions.

As for his ſecret eſpials, which he did employ both at home and abroad, by them to diſcover what practices and conſpiracies were againſt him, ſurely his caſe required it; he had ſuch moles perpetually working and caſting

to

to undermine him. Neither can it be reprehended: for if eſpials be lawful againſt lawful enemies, much more againſt conſpirators and traitors. But indeed to give them credence by oaths or curſes, that cannot be well maintained; for thoſe are too holy veſtments for a diſguiſe. Yet ſurely there was this farther good in his employing of theſe flies and familiars; that as the uſe of them was the cauſe that many conſpiracies were revealed, ſo the fame and ſuſpicion of them kept (no doubt) many conſpiracies from being attempted.

Towards his queen he was nothing uxorious, nor ſcarce indulgent; but companiable and reſpective, and without jealouſy. Towards his children he was full of paternal affection, careful of their education, aſpiring to their high advancement, regular to ſee that they ſhould not want of any due honour and reſpect, but not greatly willing to caſt any popular luſtre upon them.

To his council he did refer much, and ſate oft in perſon; knowing it to be the way to aſſiſt his power, and inform his judgment. In which reſpect alſo he was fairly patient of liberty, both of advice, and of vote, till himſelf were declared. He kept a ſtrait hand on his nobility, and choſe rather to advance clergymen and lawyers, which were more obſequious to him, but had leſs intereſt in the people; which made for his abſoluteneſs, but not for his ſafety. Inſomuch as (I am perſuaded) it was one of the cauſes of his troubleſome reign; for that his nobles, though they were loyal and obedient, yet did not co-operate with him, but let every man go his own way. He was not afraid of an able man, as *Lewis* the eleventh was: But contrariwiſe, he was ſerved by the ableſt men that were to be found; without which his affairs could not have proſpered as they did. For war, *Bedford*, *Oxford*, *Surrey*, *D'Aubigny*, *Brook*, *Poynings:* For other affairs, *Morton*, *Fox*, *Bray*, the prior of *Lanthony*, *Warham*, *Urſwick*, *Huſſey*, *Frowick*, and others. Neither did he care how cunning they were that he did employ; for he thought himſelf to have the maſter-reach. And as he choſe well, ſo he held them up well: for it is a ſtrange thing, that though he were a dark prince, and infinitely ſuſpicious, and his times full of ſecret conſpiracies and troubles; yet in twenty four years reign, he never put down, or diſcompoſed counſellor, or near ſervant, ſave only *Stanley* the lord chamberlain. As for the diſpoſition of his ſubjects in general towards him, it ſtood thus with him; that of the three affections, which naturally tie the hearts of the ſubjects to their ſovereigns, love, fear, and reverence; he had the laſt in height, the ſecond in good meaſure, and ſo little of the firſt, as he was beholden to the other two.

He was a prince, ſad, ſerious, and full of thoughts, and ſecret obſervations, and full of notes and memorials of his own hand, eſpecially touching perſons. As, whom to employ, whom to reward, whom to enquire of, whom to beware of, what were the dependencies, what were the factions, and the like; keeping (as it were) a journal of his thoughts. There is to this day a merry tale; that his monkey (ſet on as it was thought by one of his chamber) tore his principal note book all to pieces, when by chance it lay forth: Whereat the court (which liked not thoſe penſive accounts) was almoſt tickled with ſport.

He was indeed full of apprehenſions and ſuſpicions: But as he did eaſily take them, ſo he did eaſily check them and maſter them; whereby they were not dangerous, but troubled himſelf more than others. It is true, his thoughts were ſo many, as they could not well always ſtand together;

but that which did good one way, did hurt another: Neither did he at ſome times weigh them aright in their proportions. Certainly, that rumour which did him ſo much miſchief (that the duke of *York* ſhould be ſaved, and alive) was (at the firſt) of his own nouriſhing; becauſe he would have more reaſon not to reign in the right of his wife. He was affable, and both well and fair-ſpoken; and would uſe ſtrange ſweetneſs and blandiſhments of words, where he deſired to effect or perſuade any thing that he took to heart. He was rather ſtudious than learned; reading moſt books that were of any worth in the *French* tongue. Yet he underſtood the *Latin*, as appeareth in that cardinal *Hadrian*, and others, who could very well have written *French*, did uſe to write to him in *Latin*.

For his pleaſures, there is no news of them: and yet by his inſtructions to *Marſin* and *Stile*, touching the queen of *Naples*, it ſeemeth he could interrogate well touching beauty. He did by pleaſures, as great princes do by banquets, come and look a little upon them, and turn away: For never prince was more wholly given to his affairs, nor in them more of himſelf: Inſomuch as in triumphs of juſts and tourneys, and balls, and maſks (which they then called diſguiſes) he was rather a princely and gentle ſpectator, than ſeemed much to be delighted.

No doubt, in him as in all men (and moſt of all in kings) his fortune wrought upon his nature, and his nature upon his fortune. He attained to the crown, not only from a private fortune, which might endow him with moderation; but alſo from the fortune of an exiled man, which had quickened in him all ſeeds of obſervation and induſtry. And his times being rather proſperous than calm, had raiſed his confidence by ſucceſs, but almoſt marred his nature by troubles. His wiſdom, by often evading from perils, was turned rather into a dexterity to deliver himſelf from dangers, when they preſſed him, than into a providence to prevent and remove them afar off: And even in nature, the ſight of his mind was like ſome ſights of eyes; rather ſtrong at hand, than to carry afar off. For his wit encreaſed upon the occaſion; and ſo much the more, if the occaſion were ſharpened by danger. Again, whether it were the ſhortneſs of his foreſight, or the ſtrength of his will, or the dazling of his ſuſpicions, or what it was; certain it is, that the perpetual troubles of his fortunes (there being no more matter out of which they grew) could not have been without ſome great defects and main errors in his nature, cuſtoms, and proceedings, which he had enough to do to ſave and help with a thouſand little induſtries and watches. But thoſe do beſt appear in the ſtory it ſelf. Yet take him with all his defects, if a man ſhould compare him with the kings his concurrents in *France* and *Spain*, he ſhall find him more politick than *Lewis* the twelfth of *France*, and more entire and ſincere than *Ferdinando* of *Spain*. But if you ſhall change *Lewis* the twelfth, for *Lewis* the eleventh, who lived a little before, then the conſort is more perfect. For that *Lewis* the eleventh, *Ferdinando* and *Henry*, may be eſteemed for the *Tres Magi* of kings of thoſe ages. To conclude, if this king did no greater matters, it was long of himſelf; for what he minded he compaſſed.

He was a comely perſonage, a little above juſt ſtature, well and ſtrait limbed, but ſlender. His countenance was reverend, and a little like a churchman: and as it was not ſtrange or dark, ſo neither was it winning or pleaſing, but as the face of one well diſpoſed. But it was to the diſadvantage of the painter, for it was beſt when he ſpake.

His worth may bear a tale or two, that may put upon him ſomewhat that may ſeem divine. When the lady *Margaret* his mother had divers great ſuitors for marriage, ſhe dreamed one night, that one in the likeneſs of a biſhop in pontifical habit, did tender her *Edmund* earl of *Richmond*, (the king's father) for her huſband, neither had ſhe ever any child but the king, though ſhe had three huſbands. One day when king *Henry* the ſixth (whoſe innocency gave him holineſs) was waſhing his hands at a great feaſt, and caſt his eye upon king *Henry*, then a young youth, he ſaid; this is the lad that ſhall poſſeſs quietly that that we now ſtrive for. But that that was truly divine in him was, that he had the fortune of a true Chriſtian, as well as of a great king, in living exerciſed, and dying repentant: So as he had an happy warfare in both conflicts, both of ſin and the croſs.

He was born at *Pembroke* caſtle, and lieth buried at *Weſtminſter*, in one of the ſtatelieſt and daintieſt monuments of *Europe*, both for the chapel, and for the ſepulchre. So that he dwelleth more richly dead, in the monument of his tomb, than he did alive in *Richmond*, or any of his palaces. I could wiſh he did the like in this monument of his fame.

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THE

# HISTORY

OF THE

# REIGN

OF

# KING *HENRY* VIII.

After the deceaſe of that wiſe and fortunate king, king *Henry* the ſeventh, who died in the height of his proſperity, there followed (as uſed to do, when the ſun ſetteth ſo exceeding clear,) one of the faireſt mornings of a kingdom that hath been known in this land, or any where elſe. A young king, about eighteen years of age, for ſtature, ſtrength, making, and beauty, one of the goodlieſt perſons of his time. And though he were given to pleaſure, yet

he was likewiſe deſirous of glory; ſo that there was a paſſage open in his mind, by glory, for virtue. Neither was he unadorned with learning, tho' therein he came ſhort of his brother *Arthur*. He had never any the leaſt pique, difference, or jealouſy, with the king his father, which might give any occaſion of altering court or council upon the change; but all things paſſed in a ſtill. He was the firſt heir of the white and the red roſe; ſo that there was no diſcontented party now left in the kingdom, but all mens hearts turned towards him: and not only their hearts, but their eyes alſo: For he was the only ſon of the kingdom. He had no brother; which tho' it be a comfortable thing for kings to have, yet it draweth the ſubjects eyes a little aſide. And yet being a married man in thoſe young years, it promiſed hope of ſpeedy iſſue to ſucceed in the crown. Neither was there any queen mother, who might ſhare any way in the government, or claſh with his counſellors for authority, while the king intended his pleaſure. No ſuch thing as any great and mighty ſubject, who might any way eclipſe or overſhade the imperial power. And for the people, and ſtate in general, they were in ſuch lowneſs of obedience, as ſubjects were like to yield, who had lived almoſt four and twenty years, under ſo politick a king as his father; being alſo one who came partly in by the ſword; and had ſo high a courage in all points of regality; and was ever victorious in rebellions and ſeditions of the people. The crown extremely rich, and full of treaſure, and the kingdom like to be ſo in ſhort time. For there was no war, no dearth, no ſtop of trade, or commerce; it was only the crown which had ſucked too hard, and now being full, and upon the head of a young king, was like to draw leſs. Laſtly, he was inheritor of his father's reputation, which was great throughout the world. He had ſtrait alliance with the two neighbour ſtates, an ancient enemy in former times, and an ancient friend, *Scotland* and *Burgundy*. He had peace and amity with *France*, under the aſſurance, not only of treaty and league, but of neceſſity and inability in the *French* to do him hurt, in reſpect that the *French* king's deſigns were wholly bent upon *Italy*: ſo that it may be truly ſaid, there had ſcarcely been ſeen, or known, in many ages, ſuch a rare concurrence of ſigns and promiſes, of a happy and flouriſhing reign to enſue, as were now met in this young king, called, after his father's name, *Henry* the eighth, *&c.*

THE

# THE BEGINNING OF THE HISTORY OF *GREAT BRITAIN.*

BY the deceaſe of *Elizabeth* queen of *England*, the iſſues of king *Henry* the eighth failed, being ſpent in one generation, and three ſucceſſions. For that king, though he were one of the goodlieſt perſons of his time, yet he left only by his ſix wives three children; who reigning ſucceſſively, and dying childleſs, made place to the line of *Margaret*, his eldeſt ſiſter, married to *James* the fourth king of *Scotland*. There ſucceeded therefore to the kingdom of *England James* the ſixth then king of *Scotland*, deſcended of the ſame *Margaret* both by father and mother: ſo that by a rare event in the pedigrees of kings, it ſeemed as if the divine providence, to extinguiſh and take away all envy and note of a ſtranger, had doubled upon his perſon, within the circle of one age, the royal blood of *England* by both parents. This ſucceſſion drew towards it the eyes of all men, being one of the moſt memorable accidents that had happened a long time in the Chriſtian world. For the kingdom of *France* having been reunited in the age before in all the provinces thereof formerly diſmembred; and the kingdom of *Spain* being of more freſh memory, united and made entire, by the annexing of *Portugal* in the perſon of *Philip* the ſecond; there remained but this third and laſt union, for the counterpoizing of the power of theſe three great monarchies; and the diſpoſing of the affairs of *Europe* thereby to a more aſſured and univerſal peace and concord. And this event did hold mens obſervations and diſcourſes the more, becauſe the iſland of *Great Britain* divided from the reſt of the world, was never before united in it ſelf under one king, notwithſtanding the people be of one language, and not ſeparate by mountains or great waters: and notwithſtanding alſo that the uniting of them had been in former times induſtriouſly attempted both by war and treaty. Therefore it ſeemed a manifeſt work of providence, and a caſe of reſervation for theſe times; inſomuch that the vulgar conceived that now there was an end given, and a conſummation to ſuperſtitious prophecies (the belief of fools, but the talk ſometimes of wiſe men) and to an ancient tacite expectation, which had by tradition been infuſed and inveterated into mens minds. But as the beſt divinations and predictions, are the politick and probable foreſight

ſight and conjectures of wiſe men, ſo in this matter the providence of king *Henry* the ſeventh was in all mens mouths; who being one of the deepeſt and moſt prudent princes of the world, upon the deliberation concerning the marriage of his eldeſt daughter into *Scotland*, had by ſome ſpeech uttered by him, ſhewed himſelf ſenſible and almoſt preſcient of this event.

NEITHER did there want a concurrence of divers rare external circumſtances (beſides the virtues and conditions of the perſon) which gave great reputation to this ſucceſſion. A king in the ſtrength of his years, ſupported with great alliances abroad, eſtabliſhed with royal iſſue at home, at peace with all the world, practiſed in the regiment of ſuch a kingdom, as might rather enable a king by variety of accidents, than corrupt him with affluence or vain-glory; and one that beſides his univerſal capacity and judgment, was notably exerciſed and practiſed in matters of religion and the church; which in theſe times by the confuſed uſe of both ſwords, are become ſo intermixed with conſiderations of eſtate, as moſt of the counſels of ſovereign princes or republicks depend upon them: but nothing did more fill foreign nations with admiration and expectation of his ſucceſſion, than the wonderful and (by them) unexpected conſent of all eſtates and ſubjects of *England*, for the receiving of the king without the leaſt ſcruple, pauſe or queſtion. For it had been generally diſperſed by the fugitives beyond the ſeas (who partly to apply themſelves to the ambition of foreigners, and partly to give eſtimation and value to their own employments, uſed to repreſent the ſtate of *England* in a falſe light) that after queen *Elizabeth*'s deceaſe, there muſt follow in *England* nothing but confuſions, interreigns, and perturbations of eſtate, likely far to exceed the ancient calamities of the civil wars between the houſes of *Lancaſter* and *York*, by how much more the diſſenſions were like to be more mortal and bloody, when foreign competition ſhould be added to domeſtical; and diviſions for religion to matter of title to the crown. And in ſpecial, *Parſons* the Jeſuit, under a diſguiſed name, had not long before publiſhed an expreſs treatiſe, wherein whether his malice made him believe his own fancies, or whether he thought it the fitteſt way to move ſedition, like evil ſpirits, which ſeem to foretel the tempeſt they mean to move; he laboured to diſplay and give colour to all the vain pretences and dreams of ſucceſſion which he could imagine; and thereby had poſſeſſed many abroad that knew not the affairs here with thoſe his vanities. Neither wanted there here within this realm, divers perſons both wiſe and well affected, who though they doubted not of the undoubted right, yet ſetting before themſelves the waves of peoples hearts (guided no leſs by ſudden and temporary winds, than by the natural courſe and motion of the waters) were not without fear what might be the event. For queen *Elizabeth* being a princeſs of extream caution, and yet one that loved admiration above ſafety; and knowing the declaration of a ſucceſſor might in a point of ſafety be diſputable, but in point of admiration and reſpect aſſuredly to her diſadvantage; had from the beginning ſet it down for a maxim of eſtate, to impoſe a ſilence touching ſucceſſion. Neither was it only reſerved as a ſecret of eſtate, but reſtrained by ſevere laws; that no man ſhould preſume to give opinion, or maintain argument touching the ſame: ſo that though the evidence of right drew all the ſubjects of the land to think one thing; yet the fear of the danger of the law, made no man privy to others thoughts. And therefore it rejoiced all men to ſee ſo fair a morning of a kingdom, and to be throughly ſecured of former apprehenſions; as a man that awaketh out of a fearful dream. But ſo it was, that

not only the conſent, but the applauſe and joy was infinite, and not to be expreſſed, throughout the realm of *England* upon this ſucceſſion: whereof the conſent (no doubt) may be truly aſcribed to the clearneſs of the right; but the general joy, alacrity, and gratulation, were the effects of differing cauſes. For queen *Elizabeth*, although ſhe had the uſe of many both virtues and demonſtrations, that might draw and knit unto her the hearts of her people; yet nevertheleſs carrying a hand reſtrained in gift, and ſtrained in points of prerogative, could not anſwer the votes either of ſervants or ſubjects to a full contentment; eſpecially in her latter days, when the continuance of her reign (which extended to five and forty years) might diſcover in people, their natural deſire and inclination towards change, ſo that a new court, and a new reign, were not to many unwelcome. Many were glad, and eſpecially thoſe of ſettled eſtates and fortunes, that the fears and uncertainties were overblown, and that the dye was caſt. Others that had made their way with the king, or offered their ſervice in the time of the former queen, thought now the time was come for which they had prepared: and generally all ſuch as had any dependence upon the late earl of *Eſſex* (who had mingled the ſervice of his own ends, with the popular pretence of advancing the king's title) made account their cauſe was amended. Again, ſuch as might miſdoubt they had given the king any occaſion of diſtaſte, did contend by their forwardneſs and confidence to ſhew, it was but their faſtneſs to the former government, and that thoſe affections ended with the time. The papiſts nouriſhed their hopes, by collating the caſe of the papiſts in *England*, and under queen *Elizabeth*, and the caſe of the papiſts in *Scotland* under the king; interpreting that the condition of them in *Scotland* was the leſs grievous, and divining of the king's government here accordingly: beſides the comfort they miniſtred to themſelves from the memory of the queen his mother. The miniſters, and thoſe which ſtood for the preſbytery, thought their cauſe had more ſympathy with the diſcipline of *Scotland*, than the hierarchy of *England*, and ſo took themſelves to be a degree nearer their deſires. Thus had every condition of perſons ſome contemplation of benefit, which they promiſed themſelves; over-reaching perhaps according to the nature of hope, but yet not without ſome probable ground of conjecture. At which time alſo there came forth in print the king's book, entitled Βασιλικὸν Δῶρον: containing matter of inſtruction to the prince his ſon, touching the office of a king; which book falling into every man's hand, filled the whole realm, as with a good perfume or incenſe, before the king's coming in: for being excellently written, and having nothing of affectation, it did not only ſatisfy better than particular reports touching the king's diſpoſition, but far exceeded any formal or curious edict or declaration, which could have been deviſed of that nature, wherewith princes in the beginning of their reigns do uſe to grace themſelves, or at leaſt expreſs themſelves gracious in the eyes of their people. And this was for the general, the ſtate and conſtitution of mens minds upon this change: the actions themſelves paſſed in this manner, *&c.*

MISCELLANY

# WORKS

Of the Right Honourable

## *Francis* Lord *Verulam*,

Publiſhed by *WILLIAM RAWLEY*, D.D. An. 1629.

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## To the Reader.

I Have thought good, as a ſervant to the labours and memory of that noble lord, the lord viſcount St. *Alban*, to collect into one theſe few, rather parcels than juſt works, of his excellent Pen: Which I have done for theſe cauſes. Firſt, to vindicate the wrong his lordſhip ſuffered, by a corrupt and ſurreptitious edition of that diſcourſe of his, touching a war with *Spain*, lately ſet forth. Secondly, by way of prevention, to exempt from the like injury and defacements, thoſe other diſcourſes of his herein contained. Laſtly, to ſatisfy the deſires of ſome, who hold it unreaſonable, that any the delineations of that pen, though in never ſo ſmall a model, ſhould not be ſhewn to the world. I know it carries the excuſe with it after the author's death, to publiſh fragments: therefore I will make none. Theſe works being all for the argument civil, I cannot repreſent better than in reſemblance of *Ariſtotle*'s *Parva Naturalia*, to account them as his lordſhip's *Parva Politica*. Howſoever, I doubt not but every judicious reader, finding of his lordſhip's ſpirit in them, will know them to be his; and will afford them a place of reputation amongſt his greater works.

W. RAWLEY.

CONSI-

# CONSIDERATIONS

## TOUCHING A

# WAR

## WITH

# *SPAIN.*

### Inſcribed to Prince *Charles*, An. 1624.

YOUR highneſs hath an imperial name. It was a *Charles* that brought the empire firſt into *France*; a *Charles* that brought it firſt into *Spain*; why ſhould not *Great Britain* have its turn? But to lay aſide all that may ſeem to have a ſhew of fumes and fancies, and to ſpeak ſolids: a war with *Spain*, (if the king ſhall enter into it) is a mighty work; it requireth ſtrong materials, and active motions. He that ſaith not ſo, is zealous, but not according to knowledge. But nevertheleſs *Spain* is no ſuch giant: and he that thinketh *Spain* to be ſome great over-match for this eſtate, aſſiſted as it is, and may be, is no good mint-man; but takes greatneſs of kingdoms according to their bulk and currency, and not after their intrinſick value. Although therefore I had wholly ſequeſtred my thoughts from civil affairs, yet becauſe it is a new caſe, and concerneth my countrey infinitely, I obtained of my ſelf to ſet down, out of long continued experience in buſineſs of eſtate, and much converſation in books of policy and hiſtory, what I thought pertinent to this buſineſs; and in all humbleneſs preſent it to your highneſs: hoping that at leaſt you will diſcern the ſtrength of my affection, through the weakneſs of my abilities: for the *Spaniard* hath a good proverb, *de ſuario ſi empre con la calentura*; there is no heat of affection, but is joined with ſome idleneſs of brain.

To a war are required; a juſt quarrel; ſufficient forces and proviſions; and a prudent choice of the deſigns. So then, I will firſt juſtify the quarrel; ſecondly, balance the forces; and laſtly, propound variety of deſigns for choice, but not adviſe the choice; for that were not fit for a writing of this nature; neither is it a ſubject within the level of my judgment; I being, in effect, a ſtranger to the preſent occurrences.

WARS (I ſpeak not of ambitious predatory wars) are ſuits of appeal to the tribunal of God's juſtice, where there are no ſuperiors on earth to determine the cauſe: And they are (as civil pleas are) plaints or defences. There are therefore three juſt grounds of war with *Spain*; one plaint, two upon defence. *Solomon* ſaith, *a cord of three is not eaſily broken:* but eſpecially

when every of the lines would hold ſingle by it ſelf. They are theſe: the recovery of the *Palatinate*; a juſt fear of the ſubverſion of our civil eſtate, a juſt fear of the ſubverſion of our church and religion. For in the handling of the two laſt grounds of war, I ſhall make it plain, that wars preventive upon juſt fears, are true defenſives, as well as upon actual invaſions: and again, that wars defenſive for religion, (I ſpeak not of rebellion) are moſt juſt; though offenſive wars for religion are ſeldom to be approved, or never, unleſs they have ſome mixture of civil titles. But all that I ſhall ſay in this whole argument, will be but like bottoms of thread cloſe wound up, which with a good needle (perhaps) may be flouriſhed into large works.

For the aſſerting of the juſtice of the quarrel, for the recovery of the *Palatinate*, I ſhall not go ſo high as to diſcuſs the right of the war of *Bohemia*; which if it be freed from doubt on our part, then there is no colour nor ſhadow why the *Palatinate* ſhould be retained; the raviſhing whereof was a mere excurſion of the firſt wrong, and a ſuper-injuſtice. But I do not take my ſelf to be ſo perfect in the cuſtoms, tranſactions, and privileges of that kingdom of *Bohemia*, as to be fit to handle that part: and I will not offer at that I cannot maſter. Yet this I will ſay (in paſſage) poſitively and reſolutely; that it is impoſſible an elective monarchy ſhould be ſo free and abſolute as an hereditary; no more than it is poſſible for a father to have ſo full power and intereſt in an adoptive ſon, as in a natural; *quia naturalis obligatio fortior civili.* And again, that received maxim is almoſt unſhaken and infallible; *nil magis naturae conſentaneum eſt, quam ut iiſdem modis res diſſolvantur, quibus conſtituuntur.* So that if the part of the people or eſtate be ſomewhat in the election, you cannot make them nulls or ciphers in the privation or tranſlation. And if it be ſaid, that this is a dangerous opinion for the pope, emperor, and elective kings; it is true it is a dangerous opinion, and ought to be a dangerous opinion, to ſuch perſonal popes, emperors, or elective kings, as ſhall tranſcend their limits, and become tyrannical. But it is a ſafe and ſound opinion for their ſees, empires and kingdoms; and for themſelves alſo if they be wiſe; *plenitudo poteſtatis, eſt plenitudo tempeſtatis.* But the chief cauſe why I do not ſearch into this point is, becauſe I need it not. And in handling the right of a war, I am not willing to intermix matter doubtful, with that which is out of doubt. For as in capital cauſes, wherein but one man's life is in queſtion, *in favorem vitae*, the evidence ought to be clear; ſo much more in a judgment upon a war, which is capital to thouſands. I ſuppoſe therefore the worſt, that the offenſive war upon *Bohemia* had been unjuſt; and then make the caſe, which is no ſooner made than reſolved; if it be made not enwrapped, but plainly and perſpicuouſly. It is this *in Theſi.* An offenſive war is made, which is unjuſt in the aggreſſor; the proſecution and race of the war, carrieth the defendant to aſſail and invade the ancient and indubitate patrimony of the firſt aggreſſor, who is now turned defendant; ſhall he ſit down, and not put himſelf in defence? Or if he be diſpoſſeſſed, ſhall he not make a war for the recovery? No man is ſo poor of judgment as will affirm it. The caſtle of *Cadmus* was taken, and the city of *Thebes* it ſelf inveſted by *Phoebidas* the *Lacedaemonian*, inſidiouſly, and in violation of league: the proceſs of this action drew on a re-ſurprize of the caſtle by the *Thebans*, a recovery of the town, and a current of the war even unto the walls of *Sparta*. I demand, was the defence of the city of *Sparta*, and the expulſion of the *Thebans* out of the ancient *Laconian* territories, unjuſt?

The ſharing of that part of the duchy of *Milan*, which lieth upon the river of *Adda*, by the *Venetians*, upon contract with the *French*, was an ambitious and unjuſt purchaſe. This wheel ſet on going, did pour a war upon the *Venetians* with ſuch a tempeſt, as *Padua* and *Trevigi* were taken from them, and all their dominions upon the continent of *Italy* abandoned, and they confined within the ſalt waters. Will any man ſay, that the memorable recovery and defence of *Padua*, (when the gentlemen of *Venice*, unuſed to the wars, out of the love of their countrey, became brave and martial the firſt day;) and ſo likewiſe the re-adeption of *Trevigi*, and the reſt of their dominions, was matter of ſcruple, whether juſt or no, becauſe it had ſource from a quarrel ill begun? The war of the duke of *Urbin*, nephew to pope *Julius* the ſecond, when he made himſelf head of the *Spaniſh* mutineers, was as unjuſt as unjuſt might be; a ſupport of deſperate rebels; an invaſion of ſaint *Peter*'s patrimony; and what you will. The race of this war fell upon the loſs of *Urbin* it ſelf, which was the duke's undoubted right; yet in this caſe no penitentiary, (though he had enjoined him never ſo ſtrait penance to expiate his firſt offence) would have counſelled him to have given over the purſuit of his right for *Urbin*; which after he proſperouſly re-obtained, and hath tranſmitted to his family yet until this day. Nothing more unjuſt than the invaſion of the *Spaniſh Armada* in 88, upon our ſeas; for our land was holy land to them, they might not touch it; ſhall I ſay therefore, that the defence of *Lisbon*, or *Cales*, afterwards, was unjuſt? There be thouſands of examples; *utor in re non dubia exemplis non neceſſariis:* the reaſon is plain; wars are *Vindictae*, revenges, reparations. But revenges are not infinite, but according to the meaſure of the firſt wrong or damage. And therefore when a voluntary offenſive war, by the deſign or fortune of the war, is turned to a neceſſary defenſive war, the ſcene of the tragedy is changed, and it is a new act to begin. For the particular actions of war, though they are complicate in fact, yet they are ſeparate and diſtinct in right; like to croſs ſuits in civil pleas, which are ſometimes both juſt. But this is ſo clear, as needeth no farther to be inſiſted upon. And yet if in things ſo clear, it were fit to ſpeak of more or leſs clear in our preſent cauſe, it is the more clear on our part, becauſe the poſſeſſion of *Bohemia* is ſettled with the emperor. For though it be true, that *non datur compenſatio injuriarum*; yet were there ſomewhat more colour to detain the *Palatinate*, as in the nature of a recovery, in value or compenſation, if *Bohemia* had been loſt, or were ſtill the ſtage of the war. Of this therefore I ſpeak no more. As for the title of proſcription or forfeiture, wherein the emperor (upon the matter) hath been judge and party, and hath juſticed himſelf, God forbid but that it ſhould well endure an appeal to a war. For certainly the court of heaven is as well a chancery to ſave and debar forfeitures, as a court of common law to decide rights; and there would be work enough in *Germany*, *Italy*, and other parts, if imperial forfeitures ſhould go for good titles.

THUS much for the firſt ground of war with *Spain*, being in the nature of a plaint for the recovery of the *Palatinate*; omitting here that which might be the ſeed of a larger diſcourſe, and is verified by a number of examples; that whatſoever is gained by an abuſive treaty, ought to be reſtored *in integrum:* as we ſee the daily experience of this in civil pleas; for the images of great things are beſt ſeen contracted into ſmall glaſſes: we ſee (I ſay) that all pretorian courts, if any of the parties be entertained or laid aſleep, under pretence of arbitrement or accord, and that the other par-

ty, during that time, doth cautelouſly get the ſtart and advantage at common law, though it be to judgment and execution; yet the pretorian court will ſet back all things *in ſtatu quo prius*, no reſpect had to ſuch eviction or diſpoſſeſſion. Laſtly, let there be no miſtaking; as if when I ſpeak of a war for the recovery of the *Palatinate*, I meant, that it muſt be *in linea recta*, upon that place: for look into *jus faeciale*, and all examples, and it will be found to be without ſcruple; that after a legation *ad res repetendas*, and a refuſal, and a denunciation or indiction of a war, the war is no more confined to the place of the quarrel, but is left at large and to choice, (as to the particular conducing deſigns,) as opportunities and advantages ſhall invite.

To proceed therefore to the ſecond ground of a war with *Spain*, we have ſet it down to be, a juſt fear of the ſubverſion of our civil eſtate. So then, the war is not for the *Palatinate* only, but for *England*, *Scotland*, *Ireland*, our king, our prince, our nation, all that we have. Wherein two things are to be proved. The one, that a juſt fear, (without an actual invaſion or offence,) is a ſufficient ground of a war, and in the nature of a true defenſive: the other, that we have towards *Spain*, cauſe of juſt fear; I ſay, juſt fear: for as the civilians do well define, that the legal fear is, *juſtus metus qui cadit in conſtantem virum*, in private cauſes: So there is, *juſtus metus qui cadit in conſtantem ſenatum, in cauſa publica*; not out of umbrages, light jealouſies, apprehenſions a-far off, but out of clear foreſight of imminent danger.

Concerning the former propoſition, it is good to hear what time ſaith, *Thucydides*, in his inducement to his ſtory of the great war of *Peloponneſus*, ſets down in plain terms, that the true cauſe of that war was, the overgrowing greatneſs of the *Athenians*, and the fear that the *Lacedaemonians* ſtood in thereby; and doth not doubt to call it, a neceſſity impoſed upon the *Lacedaemonians* of a war; which are the words of a mere defenſive: adding, that the other cauſes were but ſpecious and popular. *Veriſſimam quidem, ſed minime ſermone celebratam, arbitror extitiſſe belli cauſam, Athenienſes magnos effectos, & Lacedaemoniis formidoloſos, neceſſitatem illis impoſuiſſe bellandi: Quae autem propalam ferebantur utrinque cauſae, iſtae fuerunt, &c.* The trueſt cauſe of this war, though leaſt voiced, I conceive to have been this; that the *Athenians*, being grown great, to the terror of the *Lacedaemonians*, did impoſe upon them a neceſſity of a war: but the cauſes that went abroad in ſpeech were theſe, *&c.* *Sulpitius Galba*, conſul, when he perſuaded the *Romans* to a preventive war, with the later *Philip* king of *Macedon*, in regard of the great preparations which *Philip* had then on foot, and his deſigns to ruin ſome of the confederates of the *Romans*, confidently ſaith, that they who took that for an offenſive war, underſtood not the ſtate of the queſtion. *Ignorare videmini mihi, (Quirites) non, utrum bellum an pacem habeatis, vos conſuli, (neque enim liberum id vobis permittet Philippus, qui terra marique ingens bellum molitur,) ſed utrum in Macedoniam legiones tranſportetis, an hoſtem in Italiam recipiatis.* Ye ſeem to me (ye *Romans)* not to underſtand, that the conſultation before you is not, whether you ſhall have war or peace, (for *Philip* will take order you ſhall be no chuſers, who prepareth a mighty war both by land and ſea,) but whether you ſhall tranſport the war into *Macedon*, or receive it into *Italy*. *Antiochus*, when he incited *Pruſias* king of *Bithynia*, (at that time in league with the *Romans,)* to join with him in war againſt them, ſetteth before him a juſt fear of the overſpreading greatneſs of the *Romans*, comparing it to a

fire

fire that continually took, and ſpread from kingdom to kingdom: *Venire Romanos ad omnia regna tollenda, ut nullum uſquam orbis terrarum niſi Romanum imperium eſſet; Philippum & Nabin expugnatos, ſe tertium peti; ut quiſque proximus ab oppreſſo ſit, per omnes velut continens incendium pervaſurum:* That the *Romans* came to pull down all kingdoms, and to make the ſtate of *Rome* an univerſal monarchy; that *Philip* and *Nabis* were already ruinated, and now was his turn to be aſſailed: ſo that as every ſtate lay next to the other that was oppreſſed, ſo the fire perpetually grazed. Wherein it is well to be noted, that towards ambitious ſtates, (which are noted to aſpire to great monarchies, and to ſeek upon all occaſions to enlarge their dominions,) *creſcunt argumenta juſti metus:* all particular fears do grow and multiply out of the contemplation of the general courſes and practice of ſuch ſtates. Therefore in deliberations of war againſt the *Turk*, it hath been often, with great judgment, maintained; that Chriſtian princes and ſtates have always a ſufficient ground of invaſive war againſt the enemy: not for cauſe of religion, but upon a juſt fear; foraſmuch as it is a fundamental law, in the *Turkiſh* empire, that they may (without any other provocation) make war upon Chriſtendom, for the propagation of their law; ſo that there lieth upon the Chriſtians a perpetual fear of a war (hanging over their heads) from them; and therefore they may at all times (as they think good) be upon the prevention. *Demoſthenes* expoſed to ſcorn wars which are not preventive, comparing thoſe that make them to countrey fellows in a fence ſchool, that never ward till the blow be paſt: *Ut barbari pugiles dimicare ſolent, ita vos bellum geritis cum Philippo, ex his enim is qui ictus eſt, ictui ſemper inhaeret: quod ſi cum alibi verberes, illo manus tranſfert; ictum autem depellere, aut proſpicere, neque ſcit neque vult.* As countrey fellows uſe to do when they play at waſters, ſuch a kind of war do you *(Athenians)* make with *Philip*; for with them he that gets a blow, ſtraight falleth toward when the blow is paſs'd; and if you ſtrike him in another place, thither goes his hand likewiſe: but to put by or foreſee a blow, they neither have the ſkill, nor the will.

Clinias the *Candian* (in *Plato)* ſpeaks deſperately and wildly, as if there were no ſuch thing as peace between nations; but that every nation expects but his advantage to war upon another. But yet in that exceſs of ſpeech, there is thus much that may have a civil conſtruction; namely, that every ſtate ought to ſtand upon his guard, and rather prevent than be prevented. His words are, *Quam rem fere vocant pacem, nudum & inane nomen eſt; revera autem omnibus, adverſus omnes civitates, bellum ſempiternum perdurat.* That which men for the moſt part call peace, is but a naked and empty name; but the truth is, that there is ever between all eſtates a ſecret war. I know well this ſpeech is the objection and not the deciſion, and that it is after refuted; but yet (as I ſaid before) it bears thus much of truth, that if that general malignity, and prediſpoſition to war, (which he untruly figureth to be in all nations) be produced and extended to a juſt fear of being oppreſſed, then it is no more a true peace, but a name of a peace.

As for the opinion of *Iphicrates* the *Athenian*, it demands not ſo much towards a war as a juſt fear, but rather cometh near the opinion of *Clinias*; as if there were ever amongſt nations a brooding of a war, and that there is no ſure league but impuiſſance to do hurt. For he, in the treaty of peace with the *Lacedaemonians*, ſpeaketh plain language; telling them, there could be no true and ſecure peace, except the *Lacedaemonians* yielded to thoſe things, which being granted, it would be no longer in their power to

to hurt the *Athenians*, though they would: and to ſay truth, if one mark it well, this was in all memory the main piece of wiſdom, in ſtrong and prudent counſels, to be in perpetual watch, that the ſtates about them ſhould neither by approach, nor by encreaſe of dominion, nor by ruining confederates, nor by blocking of trade, nor by any the like means, have it in their power to hurt or annoy the ſtates they ſerve; and whenſoever any ſuch cauſe did but appear, ſtrait-ways to buy it out with a war, and never to take up peace at credit, and upon intereſt. It is ſo memorable, as it is yet as freſh as if it were done yeſterday, how that triumvirate of kings (*Henry* the eighth of *England*, *Francis* the firſt of *France*, and *Charles* the fifth emperor and king of *Spain*,) were in their times ſo provident, as ſcarce a palm of ground could be gotten by either of the three, but that the other two would be ſure to do their beſt, to ſet the balance of *Europe* upright again. And the like diligence was uſed in the age before by that league, (wherewith *Guicciardine* beginneth his ſtory, and maketh it, as it were, the calendar of the good days of *Italy*) which was contracted between *Ferdinando* king of *Naples*, *Lorenzo* of *Medici* potentate of *Florence*, and *Lodovico Sforza* duke of *Milan*, deſigned chiefly againſt the growing power of the *Venetians*; but yet ſo, as the confederates had a perpetual eye one upon another, that none of them ſhould overtop. To conclude therefore, howſoever ſome ſchoolmen (otherwiſe reverend men, yet fitter to guide penknives than ſwords) ſeem preciſely to ſtand upon it; that every offenſive war muſt be *ultio*; a revenge, that preſuppoſeth a precedent aſſault or injury; yet neither do they deſcend to this point, (which we now handle) of a juſt fear; neither are they of authority to judge this queſtion againſt all the precedents of time. For certainly, as long as men are men, (the ſons, as the poets allude of *Prometheus*, and not of *Epimetheus*,) and as long as reaſon is reaſon, a juſt fear will be a juſt cauſe of a preventive war; but eſpecially if it be part of the caſe, that there be a nation that is manifeſtly detected, to aſpire to monarchy and new acqueſts; then other ſtates (aſſuredly) cannot be juſtly accuſed, for not ſtaying for the firſt blow; or for not accepting *Polyphemus*'s courteſy, to be the laſt that ſhall be eaten up.

NAY, I obſerve farther, that in that paſſage of *Plato*, which I cited before, (and even in the tenet of that perſon that beareth the reſolving part, and not the objecting part,) a juſt fear is juſtified for a cauſe of an invaſive war, though the ſame fear proceed not from the fault of the foreign ſtate to be aſſailed: for it is there inſinuated, that if a ſtate, out of the diſtemper of their own body, do fear ſedition and inteſtine troubles, to break out amongſt themſelves, they may diſcharge their own ill humours upon a foreign war for a cure. And this kind of cure was tender'd by *Jaſper Colligni*, admiral of *France*, to *Charles* the ninth the *French* king, when by a vive and forcible perſuaſion, he moved him to a war upon *Flanders*, for the better extinguiſhment of the civil wars of *France*; but neither was that counſel proſperous; neither will I maintain that poſition: for I will never ſet politicks againſt ethicks; eſpecially for that true ethicks are but as a handmaid to divinity and religion. Surely St. *Thomas* (who had the largeſt heart of the ſchool divines) bendeth chiefly his ſtyle againſt the depraved paſſions which reign in making wars, ſpeaking out of St. *Auguſtine*: *Nocendi cupiditas, ulciſcendi crudelitas, implacatus & implacabilis animus, feritas rebellandi, libido dominandi, & ſi quae ſunt ſimilia, haec ſunt quae in bellis jure culpantur.* And the ſame St. *Thomas*, in his own text, defining of the juſt cauſes of a war, doth leave it upon very general terms: *Requiritur ad bellum*

*bellum cauſa juſta, ut ſcilicet illi qui impugnantur, propter aliquam culpam, impugnationem mereantur*; for *impugnatio culpae*, is a far more general word, than *ultio injuriae*. Thus much for the firſt propoſition, of the ſecond ground of a war with *Spain:* namely, that a juſt fear is a juſt cauſe of a war; and that a preventive war is a true defenſive.

The ſecond or minor propoſition was this; that this kingdom hath cauſe of juſt fear of overthrow from *Spain*. Wherein it is true, that fears are ever ſeen in dimmer lights than facts. And on the other ſide, fears uſe (many times) to be repreſented in ſuch an imaginary faſhion, as they rather dazzle mens eyes, than open them: and therefore I will ſpeak in that manner which the ſubject requires; that is, probably, and moderately, and briefly. Neither will I deduce theſe fears to preſent occurrences; but point only at general grounds, leaving the reſt to more ſecret counſels.

Is it nothing, that the crown of *Spain* hath enlarged the bounds thereof within this laſt ſixſcore years, much more than the *Ottomans?* I ſpeak not of matches or unions, but of arms, occupations, invaſions. *Granada*, *Naples*, *Milan*, *Portugal*, the *Eaſt* and *Weſt-Indies*; all theſe are actual additions to that crown. They had a mind to *French Britain*, the lower part of *Picardy* and *Piedmont*; but they have let fall their bit. They have, at this day, ſuch a hovering poſſeſſion of the *Valtoline*, as an hobby hath over a lark: and the *Palatinate* is in their talons: ſo that nothing is more manifeſt, than that this nation of *Spain* runs a race (ſtill) of empire, when all other ſtates of Chriſtendom ſtand in effect at a ſtay. Look then a little farther into the titles whereby they have acquired, and do now hold theſe new portions of the crown; and you will find them of ſo many varieties, and ſuch natures, (to ſpeak with due reſpect) as may appear to be eaſily minted, and ſuch as can hardly at any time be wanting. And therefore, ſo many new conqueſts and purchaſes, ſo many ſtrokes of the alarum bell of fear and awaking to other nations; and the facility of the titles, which hand overhead have ſerved their turn, doth ring the peal ſo much the ſharper and the louder.

Shall we deſcend from their general diſpoſition to inlarge their dominions, to their particular diſpoſition and eye of appetite which they have had towards us: they have now twice ſought to impatroniſe themſelves of this kingdom of *England*; once by marriage with queen *Mary*; and the ſecond time by conqueſt in 88, when their forces by ſea and land were not inferior to thoſe they have now. And at that time in 88, the counſel and deſign of *Spain* was by many advertiſements revealed and laid open to be, that they found the war upon the Low Countries ſo churliſh and longſome, as they grew then to a reſolution, that as long as *England* ſtood in ſtate to ſuccour thoſe countries, they ſhould but conſume themſelves in an endleſs war; and therefore there was no other way but to aſſail and depreſs *England*, which was as a back of ſteel to the *Flemings*. And who can warrant (I pray) that the ſame counſel and deſign will not return again? So as we are in a ſtrange *dilemma* of danger: for if we ſuffer the *Flemings* to be ruined, they are our outwork, and we ſhall remain naked and diſmantled: if we ſuccour them ſtrongly, (as is fit) and ſet them upon their feet, and do not withal weaken *Spain*, we hazard to change the ſcene of the war, and to turn it upon *Ireland* or *England:* like unto rheums and defluxions, which if you apply a ſtrong repercuſſive to the place affected, and do not take away the cauſe of the diſeaſe, will ſhift, and fall ſtraightways to another joint or place. They have alſo twice invaded *Ireland*; once under the pope's

pope's banner, when they were defeated by the lord *Gray:* and after in their own name, when they were defeated by the lord *Mountjoy.* So as let this ſuffice for a taſte of their diſpoſition towards us. But it will be ſaid, this is an almanack for the old year; ſince 88 all hath been well; *Spain* hath not aſſailed this kingdom, howſoever by two ſeveral invaſions from us mightily provoked. It is true: but then conſider, that immediately after 88, they were imbroiled for a great time in the protection of the league of *France,* whereby they had their hands full; after being brought extreme low by their vaſt and continual imbracements, they were enforced to be quiet that they might take breath, and do reparations upon their former waſtes. But now of late, things ſeem to come on apace to their former eſtate; nay, with far greater diſadvantage to us; for now that they have almoſt continued, and (as it were) arched their dominions from *Milan,* by the *Valtoline* and *Palatinate,* to the Low Countries; we ſee how they thirſt and pant after the utter ruin of thoſe ſtates; having in contempt almoſt the *German* nation, and doubting little oppoſition except it come from *England:* whereby either we muſt ſuffer the *Dutch* to be ruined, to our own manifeſt prejudice; or put it upon the hazard I ſpake of before, that *Spain* will caſt at the faireſt. Neither is the point of internal danger, which groweth upon us, to be forgotten; this, that the party of the papiſts in *England* are become more knotted, both in dependence towards *Spain,* and amongſt themſelves, than they have been. Wherein again comes to be remembred the caſe of 88: for then alſo it appeared by divers ſecret letters, that the deſign of *Spain* was (for ſome years before the invaſion attempted) to prepare a party in this kingdom to adhere to the foreigner at his coming. And they bragged, that they doubted not but to abuſe and lay aſleep the queen and council of *England,* as to have any fear of the party of papiſts here; for that they knew (they ſaid) the ſtate would but caſt the eye and look about to ſee, whether there were any eminent head of that party, under whom it might unite it ſelf; and finding none worth the thinking on, the ſtate would reſt ſecure and take no apprehenſion: whereas they meant (they ſaid) to take a courſe to deal with the people, and particulars, by reconcilements, and confeſſions, and ſecret promiſes, and cared not for any head or party. And this was the true reaſon, why after that the ſeminaries began to bloſſom, and to make miſſions into *England,* (which was about the three and twentieth year of queen *Elizabeth,* at what time alſo was the firſt ſuſpicion of the *Spaniſh* invaſion) then, and not before, grew the ſharp and ſevere laws to be made againſt the papiſts. And therefore the papiſts may do well to change their thanks; and whereas they thank *Spain* for their favours, to thank them for their perils and miſeries if they ſhould fall upon them: for that nothing ever made their caſe ſo ill, as the doubt of the greatneſs of *Spain,* which adding reaſon of ſtate to matter of conſcience and religion, did whet the laws againſt them. And this caſe alſo ſeemeth (in ſome ſort) to return again at this time; except the clemency of his majeſty, and the ſtate, do ſuper-abound; as for my part, I do wiſh it ſhould: and that the proceedings towards them may rather tend to ſecurity, and providence, and point of ſtate, than to perſecution for religion. But to conclude; theſe things briefly touched, may ſerve as in a ſubject conjectural and future, for to repreſent how juſt cauſe of fear this kingdom may have towards *Spain:* omitting, as I ſaid before, all preſent and more ſecret occurrences.

THE third ground of a war with *Spain*, I have ſet down to be; a juſt fear of the ſubverſion of our church and religion: Which needeth little ſpeech. For if this war be a defenſive, (as I have proved it to be) no man will doubt, that a defenſive war againſt a foreigner for religion, is lawful. Of an offenſive war there is more diſpute. And yet in that inſtance of the war of the Holy Land and ſepulchre, I do wonder ſometimes, and the ſchoolmen want words to defend that, which S. *Bernard* wanted words to commend. But I, that in this little extract of a thing do omit things neceſſary, am not to handle things unneceſſary. No man, I ſay, will doubt, but if the pope, or king of *Spain*, would demand of us to forſake our religion upon pain of a war, it were as unjuſt a demand, as the *Perſians* made to the *Graecians* of land and water; or the *Ammorites* to the *Iſraelites* of their right eyes. And we ſee all the heathen did ſtyle their defenſive wars, *pro aris & focis*; placing their altars before their hearths. So that it is in vain of this to ſpeak farther. Only this is true; that the fear of the ſubverſion of our religion from *Spain*, is the more juſt, for that all other catholick princes and ſtates content and contain themſelves to maintain their religion within their own dominions, and meddle not with the ſubjects of other ſtates; whereas the practice of *Spain* hath been, both in *Charles* the fifth's time, and in the time of the league in *France*, by war; and now with us, by conditions of treaty, to intermeddle with foreign ſtates, and to declare themſelves protectors general of the party of catholicks, through the world. As if the crown of *Spain* had a little of this, that they would plant the pope's law by arms, as the *Ottomans* do the law of *Mahomet*. Thus much concerning the firſt main point of juſtifying the quarrel, if the king ſhall enter into a war; for this that I have ſaid, and all that followeth to be ſaid, is but to ſhew what he may do.

THE ſecond main part of that I have propounded to ſpeak of, is the balance of forces between *Spain* and us. And this alſo tendeth to no more, but what the king may do. For what he may do is of two kinds: what he may do as juſt; and what he may do as poſſible. Of the one I have already ſpoken; of the other I am now to ſpeak. I ſaid, *Spain* was no ſuch giant; and yet if he were a giant, it will be but as it was between *David* and *Goliah*, for *God is on our ſide*. But to leave all arguments that are ſupernatural, and to ſpeak in an humane and politick ſenſe, I am led to think that *Spain* is no over-match for *England*, by that which leadeth all men; that is, experience and reaſon. And with experience I will begin, for there all reaſon beginneth.

Is it fortune (ſhall we think) that in all actions of war or arms, great and ſmall, which have happened theſe many years, ever ſince *Spain* and *England* have had any thing to debate one with the other, the *Engliſh* upon all encounters have perpetually come off with honour, and the better? It is not fortune ſure; ſhe is not ſo conſtant. There is ſomewhat in the nation and natural courage of the people, or ſome ſuch thing. I will make a brief liſt of the particulars themſelves in an hiſtorical truth, no ways ſtrouted, nor made greater by language. This were a fit ſpeech (you will ſay) for a general, in the head of an army, when they were going to battel: yes; and it is no leſs fit ſpeech, to be ſpoken in the head of a council, upon a deliberation of entrance into a war. Neither ſpeak I this to diſparage the *Spaniſh* nation, whom I take to be of the beſt ſoldiers in *Europe*: But that ſorteth to our honour, if we ſtill have had the better hand.

In the year 1578, was that famous lammas day, which buried the reputation of *Don John* of *Auſtria*, himſelf not ſurviving long after. *Don John* being ſuperior in forces, aſſiſted by the prince of *Parma*, *Mondragon*, *Manſfell*, and other the beſt commanders of *Spain*, confident of victory, charged the army of the ſtates near *Rimenant*, bravely and furiouſly at the firſt; but after a fight maintained by the ſpace of a whole day, was repulſed, and forced to a retreat, with great ſlaughter of his men; and the courſe of his farther enterprizes was wholly arreſted; and this chiefly by the proweſs and virtue of the *Engliſh* and *Scotiſh* troops, under the conduct of ſir *John Norris* and ſir *Robert Stuart* colonels: Which troops came to the army but the day before, haraſſed with a long and weariſome march; and (as it is left for a memorable circumſtance in all ſtories) the ſoldiers being more ſenſible of a little heat of the ſun, than of any cold fear of death, caſt away their armour and garments from them, and fought in their ſhirts: and, as it was generally conceived, had it not been that the count of *Boſſu* was ſlack in charging the *Spaniards* upon their retreat, this fight had ſorted to an abſolute defeat. But it was enough to chaſtiſe *Don John*, for his inſidious treaty of peace, wherewith he had abuſed the ſtates at his firſt coming. And the fortune of the day, (beſides the teſtimony of all ſtories) may be the better aſcribed to the ſervice of the *Engliſh* and *Scotch*, by compariſon of this charge near *Rimenant*, (where the *Engliſh* and *Scotch* in great numbers came in action) with the like charge given by *Don John* half a year before at *Gemblours*, where the ſucceſs was contrary: there being at that time in the army but a handful of *Engliſh* and *Scotch*, and they put in diſarray by the horſemen of their own fellows.

The firſt dart of war which was thrown from *Spain* or *Rome*, upon the realm of *Ireland*, was in the year 1580; for the deſign of *Stukely* blew over into *Africk*; and the attempt of *Sanders* and *Fitz-Maurice* had a ſpice of madneſs. In that year *Ireland* was invaded by *Spaniſh* and *Italian* forces, under the pope's banner, and the conduct of *San Joſep o*, to the number of 700, or better, which landed at *Smerwick* in *Kerry*. A poor number it was to conquer *Ireland* to the pope's uſe; for their deſign was no leſs: but withal they brought arms for 5000 men above their own company, intending to arm ſo many of the rebels of *Ireland*. And their purpoſe was, to fortify in ſome ſtrong place of the wild and deſolate countrey, and there to neſtle till greater ſuccours came; they being haſtened unto this enterprize upon a ſpecial reaſon of ſtate, not proper to the enterprize it ſelf; which was by the invaſion of *Ireland*, and the noiſe thereof, to trouble the council of *England*, and to make a diverſion of certain aids, that then were preparing from hence for the low countries. They choſe a place where they erected a fort, which they called the *Fort del Or*; and from thence they bolted like beaſts of the foreſt, ſometimes into the woods and faſtneſſes, and ſometimes back again to their den. Soon after, ſiege was laid to the fort by the lord *Gray* then deputy, with a ſmaller number than thoſe were within the fort; venturouſly indeed; but haſte was made to attack them before the rebels came in to them. After the ſiege of four days only, and two or three ſallies, with loſs on their part, they that ſhould have made good the fort for ſome months, till new ſucccours came from *Spain*, or at leaſt from the rebels of *Ireland*, yielded up themſelves without conditions at the end of thoſe four days. And for that they were not in the *Engliſh* army enough to keep every man a priſoner, and for that alſo the deputy expected inſtantly to be aſſailed by the rebels; and again, there were no barks to throw them

them into, and ſend them away by ſea; they were all put to the ſword: with which queen *Elizabeth* was afterwards much diſpleaſed.

In the year 1582, was that memorable retreat of *Gaunt*; than the which there hath not been an exploit of war more celebrated. For in the true judgment of men of war, honourable retreats are no ways inferior to brave charges; as having leſs of fortune, more of diſcipline, and as much of valour. There were to the number of three hundred horſe, and as many thouſand foot *Engliſh* (commanded by ſir *John Norris*) charged by the prince of *Parma*, coming upon them with ſeven thouſand horſe; beſides that the whole army of *Spaniards* was ready to march on. Nevertheleſs ſir *John Norris* maintained a retreat without diſarray, by the ſpace of ſome miles, (part of the way champaign) unto the city of *Gaunt*, with leſs loſs of men than the enemy: The duke of *Anjou*, and the prince of *Orange*, beholding this noble action from the walls of *Gaunt*, as in a theatre, with great admiration.

In the year 1585, followed the proſperous expedition of *Drake* and *Carlile* into the *Weſt-Indies*; in the which I ſet aſide the taking of *S. Iago* and *S. Domingo* in *Hiſpaniola*, as ſurprizes rather than encounters. But that of *Carthagena*, where the *Spaniards* had warning of our coming, and had put themſelves in their full ſtrength, was one of the hotteſt ſervices, and moſt dangerous aſſaults that hath been known. For the acceſs of the town was only by a neck of land, between the ſea on the one part, and the harbour water or inner ſea on the other; fortified clean over with a ſtrong rampier and barricado; ſo as upon the aſcent of our men, they had both great ordnance and ſmall ſhot, that thundered and ſhowred upon them from the rampier in front, and from the gallies that lay at ſea in flank. And yet they forced their paſſage, and won the town, being likewiſe very well manned. As for the expedition of ſir *Francis Drake*, in the year 1587, for the deſtroying of the *Spaniſh* ſhipping and proviſion upon their own coaſt; as I cannot ſay that there intervened in that enterprize any ſharp fight or encounter; ſo nevertheleſs it did ſtrangely diſcover, either that *Spain* is very weak at home, or very ſlow to move; when they ſuffered a ſmall fleet of *Engliſh*, to make an hoſtile invaſion, or incurſion, upon their havens and roads, from *Cadiz* to *Capa Sacra*, and thence to *Caſcais*; and to fire, ſink, and carry away at the leaſt, ten thouſand ton of their great ſhipping, beſides fifty or ſixty of their ſmaller veſſels; and that in the ſight, and under the favour of their forts; and almoſt under the eye of their great admiral, (the beſt commander of *Spain* by ſea) the marquis *de Santa Cruz*, without ever being diſputed with by any fight of importance. I remember *Drake*, in the vaunting ſtyle of a ſoldier, would call this enterprize, the ſingeing of the king of *Spain's* beard.

The enterprize of 88, deſerveth to be ſtood upon a little more fully, being a miracle of time. There armed from *Spain*, in the year 1588, the greateſt navy that ever ſwam upon the ſea: For though there have been far greater fleets for number, yet for the bulk and building of the ſhips, with the furniture of great ordnance and proviſions, never the like. The deſign was to make not an invaſion only, but an utter conqueſt of this kingdom. The number of veſſels were one hundred and thirty, whereof galliaſſes and galleons ſeventy two, goodly ſhips, like floating towers, or caſtles, manned with thirty thouſand ſoldiers and mariners. This navy was the preparation of five whole years at the leaſt: It bare it ſelf alſo upon divine aſſiſtance; for it received ſpecial bleſſing from pope *Sixtus*, and was aſſigned

as an apoſtolical miſſion for the reducement of this kingdom to the obedience of the ſee of *Rome*. And in farther token of this holy warfare, there were amongſt the reſt of theſe ſhips, twelve, called by the names of the twelve apoſtles. But it was truly conceived, that this kingdom of *England* could never be overwhelmed, except the land waters came in to the ſea tides. Therefore was there alſo in readineſs in *Flanders*, a mighty ſtrong army of land forces, to the number of fifty thouſand veteran ſoldiers, under the conduct of the duke of *Parma*, the beſt commander next the *French* king *Henry* the fourth, of his time. Theſe were deſigned to join with the forces at ſea; there being prepared a number of flat bottomed boats to tranſport the land forces, under the wing and protection of the great navy. For they made no account, but that the navy ſhould be abſolutely maſter of the ſeas. Againſt theſe forces, there were prepared on our part, to the number of near one hundred ſhips; not ſo great of bulk indeed, but of a more nimble motion, and more ſerviceable; beſides a leſs fleet of thirty ſhips, for the cuſtody of the narrow ſeas. There were alſo in readineſs at land two armies; beſides other forces, to the number of ten thouſand, diſperſed amongſt the coaſt towns in the ſouthern parts. The two armies were appointed; one of them conſiſting of twenty five thouſand horſe and foot, for the repulſing of the enemy at their landing; and the other of twenty five thouſand for ſafeguard and attendance about the court and the queen's perſon. There were alſo other dormant muſters of ſoldiers throughout all parts of the realm, that were put in readineſs, but not drawn together. The two armies were aſſigned to the leading of two generals, noble perſons, but both of them rather courtiers, and aſſured to the ſtate, than martial men; yet lined and aſſiſted with ſubordinate commanders of great experience and valour. The fortune of the war made this enterprize at firſt a play at baſe. The *Spaniſh* navy ſet forth out of the *Groyne* in *May*, and was diſperſed and driven back by weather. Our navy ſet forth ſomewhat later out of *Plimouth*, and bare up towards the coaſt of *Spain* to have fought with the *Spaniſh* navy; and partly by reaſon of contrary winds, partly upon advertiſement that the *Spaniards* were gone back, and upon ſome doubt alſo that they might paſs by towards the coaſt of *England*, whilſt we were ſeeking them afar off, returned likewiſe into *Plimouth* about the middle of *July*. At that time came more confident advertiſement, (though falſe) not only to the lord admiral, but to the court, that the *Spaniards* could not poſſibly come forward that year; whereupon our navy was upon the point of diſbanding, and many of our men gone aſhore: At which very time the invincible *Armada*, (for ſo it was called in a *Spaniſh* oſtentation throughout *Europe)* was diſcovered upon the weſtern coaſt. It was a kind of ſurprize; for that (as was ſaid) many of our men were gone to land, and our ſhips ready to depart. Nevertheleſs the admiral, with ſuch ſhips only as could ſuddenly be put in readineſs, made forth towards them; inſomuch as of one hundred ſhips, there came ſcarce thirty to work. Howbeit with them, and ſuch as came daily in, we ſet upon them, and gave them the chaſe. But the *Spaniards* for want of courage (which they called commiſſion) declined the fight, caſting themſelves continually into roundels, (their ſtrongeſt ſhips walling in the reſt) and in that manner they made a flying march towards *Calais*. Our men by the ſpace of five or ſix days followed them cloſe, fought with them continually, made great ſlaughter of their men, took two of their great ſhips, and gave divers others of their ſhips their death's wounds, whereof ſoon after they ſank and periſhed; and, in a word,

diſtreſſed

diſtreſſed them almoſt in the nature of a defeat; we our ſelves in the mean time receiving little or no hurt. Near *Calais* the *Spaniards* anchored, expecting their land forces, which came not. It was afterwards alleged, that the duke of *Parma* did artificially delay his coming; but this was but an invention and pretenſion given out by the *Spaniards*; partly upon a *Spaniſh* envy againſt that duke, being an *Italian*, and his ſon a competitor to *Portugal*; but chiefly to ſave the monſtrous ſcorn and diſreputation, which they and their nation received by the ſucceſs of that enterprize. Therefore their colours and excuſes (forſooth) were, that their general by ſea had a limited commiſſion, not to fight until the land forces were come in to them: and that the duke of *Parma* had particular reaches and ends of his own underhand, to croſs the deſign. But it was both a ſtrange commiſſion, and a ſtrange obedience to a commiſſion; for men in the midſt of their own blood and being ſo furiouſly aſſailed, to hold their hands contrary to the laws of nature and neceſſity. And as for the duke of *Parma*, he was reaſonably well tempted to be true to that enterprize, by no leſs promiſe than to be made a feudatary, or beneficiary king of *England*, under the ſeignory (in chief) of the pope, and the protection of the king of *Spain*. Beſides, it appeared that the duke of *Parma* held his place long after in the favour and truſt of the king of *Spain*, by the great employments and ſervices that he performed in *France*: and again, it is manifeſt, that the duke did his beſt to come down, and to put to ſea: the truth was, that the *Spaniſh* navy, upon thoſe proofs of fight which they had with the *Engliſh*, finding how much hurt they received, and how little hurt they did, by reaſon of the activity and low building of our ſhips, and ſkill of our ſeamen; and being alſo commanded by a general of ſmall courage and experience, and having loſt at the firſt, two of their braveſt commanders at ſea, *Pedro de Valdez*, and *Michael de Oquenda*; durſt not put it to a battel at ſea, but ſet up their reſt wholly upon the land enterprize. On the other ſide, the tranſporting of the land forces failed in the very foundation: For whereas the council of *Spain* made full account, that their navy ſhould be maſters of the ſea, and therefore able to guard and protect the veſſels of tranſportation; when it fell out to the contrary that the great navy was diſtreſſed, and had enough to do to ſave it ſelf; and again, that the *Hollanders* impounded their land forces with a brave fleet of thirty ſail, excellently well appointed; things (I ſay) being in this ſtate, it came to paſs that the duke of *Parma* muſt have flown if he would have come into *England*, for he could get neither bark nor mariner to put to ſea: yet certain it is, that the duke looked ſtill for the coming back of the *Armada*, even at that time when they were wandring, and making their perambulation upon the northern ſeas. But to return to the *Armada*, which we left anchored at *Calais*: from thence (as ſir *Walter Rawleigh* was wont prettily to ſay) they were ſuddenly driven away with ſquibs; for it was no more but a ſtratagem of fire boats, manleſs, and ſent upon them by the favour of the wind in the night time, that did put them in ſuch terror, as they cut their cables, and left their anchors in the ſea. After they hovered ſome two or three days about *Graveling*, and there again were beaten in a great fight; at what time our ſecond fleet, which kept the narrow ſeas, was come in and joined to our main fleet. Thereupon the *Spaniards* entring into farther terror, and finding alſo divers of their ſhips every day to ſink, loſt all courage, and inſtead of coming up into the *Thames* mouth for *London*, (as their deſign was,) fled on towards the north to ſeek their fortunes; being ſtill chaſed by the *Engliſh* navy at the heels,

heels, until we were fain to give them over for want of powder. The breath of *Scotland* the *Spaniards* could not endure; neither durſt they as invaders land in *Ireland*; but only ennobled ſome of the coaſts thereof with ſhipwracks. And ſo going northwards aloof, as long as they had any doubt of being purſued, at laſt when they were out of reach, they turned, and croſſed the ocean to *Spain*, having loſt fourſcore of their ſhips, and the greater part of their men. And this was the end of that ſea-giant, and invincible *Armada:* which having not ſo much as fired a cottage of ours at land, nor taking a cock-boat of ours at ſea, wandered through the wilderneſs of the northern ſeas; and according to the curſe in the ſcripture, *came out againſt us one way, and fled before us ſeven ways.* Serving only to make good the judgment of an aſtrologer long before given, *octuageſimus octavus mirabilis annus:* or rather, to make good (even to the aſtoniſhment of all poſterity) the wonderful judgments of God, poured down commonly upon vaſt and proud aſpirings.

In the year that followed of 1589, we gave the *Spaniards* no breath, but turned challengers, and invaded the main of *Spain.* In which enterprize, although we failed of our end, which was to ſettle *Don Antonio* in the kingdom of *Portugal*, yet a man ſhall hardly meet with an action that doth better reveal the great ſecret of the power of *Spain:* which power well ſought into, will be found rather to conſiſt in a veteran army, (ſuch as upon ſeveral occaſions and pretenſions they have ever had on foot, in one part or other of *Chriſtendom*, now by the ſpace of almoſt ſixſcore years) than in the ſtrength of their dominions and provinces. For what can be more ſtrange, or more to the diſvaluation of the power of the *Spaniard* upon the continent, than that with an army of eleven thouſand *Engliſh* land-ſoldiers, and a fleet of twenty ſix ſhips of war, beſides ſome weak veſſels for tranſportation, we ſhould within the hour-glaſs of two months, have won one town of importance by ſcalado, battered and aſſaulted another, overthrown great forces in the field, and that upon the diſadvantage of a bridge ſtrongly barricadoed, landed the army in three ſeveral places of his kingdom, marched ſeven days in the heart of his countries, lodged three nights in the ſuburbs of his principal city, beaten his forces into the gates thereof, poſſeſſed two of his frontier forts, and come off after all this with ſmall loſs of men, otherwiſe than by ſickneſs? And it was verily thought, that had it not been for four great diſfavours of that voyage, (that is to ſay, the failing in ſundry proviſions that were promiſed, eſpecially of cannons for battery; the vain hopes of *Don Antonio*, concerning the people of the countrey to come in to his aid; the diſappointment of the fleet that was directed to come up the river of *Lisbon*; and laſtly, the diſeaſes which ſpread in the army by reaſon of the heat of the ſeaſon, and of the ſoldiers miſrule in diet;) the enterprize had ſucceeded, and *Lisbon* had been carried. But howſoever it makes proof to the world, that an invaſion of a few *Engliſh* upon *Spain*, may have juſt hope of victory, at leaſt of paſſport to depart ſafely.

In the year 1591, was that memorable fight of an *Engliſh* ſhip called the *Revenge*, under the command of ſir *Richard Greenvil*; memorable (I ſay) even beyond credit, and to the height of ſome heroical fable: and though it were a defeat, yet it exceeded a victory; being like the act of *Sampſon*, that killed more men at his death, than he had done in the time of all his life. This ſhip, for the ſpace of fifteen hours, ſate like a ſtag amongſt hounds at the bay, and was ſieged, and fought with, in turn, by fifteen great

great ſhips of *Spain*, part of a navy of fifty five ſhips in all; the reſt like abettors looking on afar off. And amongſt the fifteen ſhips that fought, the great *S. Philippo* was one; a ſhip of fifteen hundred ton, prince of the twelve *Sea-Apoſtles*, which was right glad when ſhe was ſhifted off from the *Revenge*. This brave ſhip the *Revenge*, being manned only with two hundred (ſoldiers and mariners) whereof eighty lay ſick; yet nevertheleſs after a fight maintained (as was ſaid) of fifteen hours, and two ſhips of the enemy ſunk by her ſide, beſides many more torn and battered, and great ſlaughter of men, never came to be entred, but was taken by compoſition; the enemies themſelves having in admiration the virtue of the commander, and the whole tragedy of that ſhip.

In the year 1596, was the ſecond invaſion that we made upon the main territories of *Spain*; proſperouſly atchieved by that worthy and famous *Robert* earl of *Eſſex*, in conſort with the noble earl of *Nottingham* that now liveth, then admiral. This journey was like lightning; for in the ſpace of fourteen hours the king of *Spain*'s navy was deſtroyed, and the town of *Cadiz* taken. The navy was no leſs than fifty tall Ships, beſides twenty galleys to attend them. The ſhips were ſtraightways beaten, and put to flight with ſuch terror, as the *Spaniards* in the end were their own executioners, and fired them all with their own hands. The galleys, by the benefit of the ſhores and ſhallows, got away. The town was a fair, ſtrong, well built, and rich city; famous in antiquity, and now moſt ſpoken of for this diſaſter. It was manned with four thouſand ſoldiers foot, and ſome four hundred horſe; it was ſacked and burned, though great clemency was uſed towards the inhabitants. But that which is no leſs ſtrange than the ſudden victory, is the great patience of the *Spaniards*; who though we ſtayed upon the place divers days, yet never offered us any play then, nor ever put us in ſuit by any action of revenge or reparation, at any time after.

In the year 1600, was the battel of *Newport* in the Low Countries, where the armies of the arch-duke, and the ſtates, tried it out by a juſt battel. This was the only battel that was fought in thoſe countries theſe many years. For battels in the *French* wars have been frequent, but in the wars of *Flanders* rare, as the nature of a defenſive requireth. The forces of both armies were not much unequal: that of the ſtates exceeded ſomewhat in number, but that again was recompenſed in the quality of the ſoldiers; for thoſe of the *Spaniſh* part were of the flower of all their forces. The arch-duke was the aſſailant, and the preventer, and had the fruit of his diligence and celerity. For he had charged certain companies of *Scotiſh* men, to the number of eight hundred, ſent to make good a paſſage, and thereby ſevered from the body of the army, and cut them all in pieces: for they, like a brave infantry, when they could make no honourable retreat, and would take no diſhonourable flight, made good the place with their lives. This entrance of the battel did whet the courage of the *Spaniards*, though it dulled their ſwords; ſo as they came proudly on, confident to defeat the whole army. The encounter of the main battel which followed, was a juſt encounter, not haſtened to a ſudden rout, nor the fortune of the day reſting upon a few former ranks, but fought out to the proof by ſeveral ſquadrons, and not without various ſucceſs; *haeret pede pes, denſuſque viro vir*. There fell out an error in the *Dutch* army, by the overhaſty medly of ſome of their men with the enemies, which hindred the playing of their great ordnance. But the end was, that the *Spaniards* were utterly defeated

defeated, and near five thouſand of their men in the fight, and in the execution, ſlain and taken; amongſt whom were many of the principal perſons of their army. The honour of the day was, both by the enemy and the *Dutch* themſelves, aſcribed unto the *Engliſh*; of whom ſir *Francis Vere*, in a private commentary which he wrote of that ſervice leaveth teſtified, that of fifteen hundred in number, (for they were no more) eight hundred were ſlain in the field: and (which is almoſt incredible in a day of victory) of the remaining ſeven hundred, two men only came off unhurt. Amongſt the reſt ſir *Francis Vere* himſelf had the principal honour of the ſervice, unto whom the prince of *Orange* (as is ſaid) did tranſmit the direction of the army for that day; and in the next place ſir *Horace Vere* his brother, that now liveth, who was the principal in the active part. The ſervice alſo of ſir *Edward Cecil*, ſir *John Ogle*, and divers other brave gentlemen, was eminent.

In the year 1601, followed the battel of *Kingſale* in *Ireland*. By this *Spaniſh* invaſion of *Ireland*, (which was in *September* that year) a man may gueſs how long time a *Spaniard* will live in *Iriſh* ground; which is a matter of a quarter of a year, or four months at the moſt. For they had all the advantages in the world; and no man would have thought (conſidering the ſmall forces employed againſt them) that they could have been driven out ſo ſoon. They obtained, without reſiſtance, in the end of *September*, the town of *Kingſale*; a ſmall garriſon of one hundred and fifty *Engliſh*, leaving the town upon the *Spaniards* approach, and the townſmen receiving the foreigners as friends. The number of *Spaniards* that put themſelves into *Kingſale*, was two thouſand men, ſoldiers of old bands, under the command of *Don John d'Aquila*, a man of good valour. The town was ſtrong of it ſelf; neither wanted there any induſtry to fortify it on all parts, and make it tenable, according to the ſkill and diſcipline of *Spaniſh* fortification. At that time the rebels were proud, being encouraged upon former ſucceſſes; for though the then deputy, the lord *Mountjoy*, and ſir *George Carew*, preſident of *Munſter*, had performed divers good ſervices to their prejudice; yet the defeat they had given the *Engliſh* at *Blackwater*, not long before, and the treaty (too much to their honour) with the earl of *Eſſex*, was yet freſh in their memory. The deputy loſt no time, but made haſte to have recovered the town before new ſuccours came, and ſate down before it in *October*, and laid ſiege to it by the ſpace of three winter months or more: during which time ſallies were made by the *Spaniard*, but they were beaten in with loſs. In *January* came freſh ſuccours from *Spain* to the number of two thouſand more, under the conduct of *Alonzo d'Ocampo*. Upon the comforts of theſe ſuccours, *Tirone* and *Odonnell* drew up their forces together, to the number of ſeven thouſand, beſides the *Spaniſh* regiments, and took the field, reſolved to reſcue the town, and to give the *Engliſh* battel. So here was the caſe: an army of *Engliſh*, of ſome ſix thouſand, waſted and tired with a long winter's ſiege, engaged in the midſt, between an army of a greater number than themſelves, freſh and in vigour, on the one ſide; and a town ſtrong in fortification, and ſtrong in men, on the other. But what was the event? This in few words; that after the *Iriſh* and *Spaniſh* forces had come on, and ſhewed themſelves in ſome bravery, they were content to give the *Engliſh* the honour as to charge them firſt; and when it came to the charge, there appeared no other difference between the valour of the *Iriſh* rebels, and the *Spaniards*, but that the one ran away before they were charged, and the other ſtraight after. And again,

the *Spaniards* that were in the town had ſo good memories of their loſſes in their former ſallies, as the confidence of an army, which came for their deliverance, could not draw them forth again. To conclude, there ſucceeded an abſolute victory for the *Engliſh*, with the ſlaughter of above two thouſand of the enemy; the taking of nine enſigns, whereof ſix *Spaniſh*; the taking of the *Spaniſh* general, *d'Ocampo*, priſoner; and this with the loſs of ſo few of the *Engliſh* as is ſcarce credible; being (as hath been rather confidently than credibly reported) but of one man, the cornet of ſir *Richard Greame*; though not a few hurt. There followed immediately after the defeat, a preſent yielding up of the town by compoſition; and not only ſo, but an avoiding (by expreſs articles of treaty accorded) of all other *Spaniſh* forces throughout all *Ireland*, from the places and neſts where they had ſettled themſelves in greater ſtrength, (as in regard of the natural ſituation of the places) than that was of *Kingſale*; which were *Caſtlehaven*, *Baltimore*, and *Beerehaven*. Indeed they went away with ſound of trumpet, for they did nothing but publiſh and trumpet all the reproaches they could deviſe, againſt the *Iriſh* land and nation; inſomuch as *D'Aquila* ſaid in open treaty, that when the devil upon the mount did ſhew *Chriſt* all the kingdoms of the earth, and the glory of them, he did not doubt but the devil left out *Ireland*, and kept it for himſelf.

I ceaſe here; omitting not a few other proofs of the *Engliſh* valour and fortunes, in theſe later times: as at the ſuburbs of *Paris*, at the *Raveline*, at *Druſe* in *Normandy*, ſome encounters in *Britanny*, and at *Oſtend*, and divers others; partly becauſe ſome of them have not been proper encounters between the *Spaniards* and the *Engliſh*; and partly becauſe others of them have not been of that greatneſs, as to have ſorted in company with the particulars formerly recited. It is true, that amongſt all the late adventures, the voyage of ſir *Francis Drake*, and ſir *John Hawkins* into the *Weſt-Indies*, was unfortunate; yet in ſuch ſort as it doth not break or interrupt our preſcription, to have had the better of the *Spaniards* upon all fights of late. For the diſaſter of that journey was cauſed chiefly by ſickneſs; as might well appear by the deaths of both the generals, (ſir *Francis Drake*, and ſir *John Hawkins*) of the ſame ſickneſs amongſt the reſt. The land enterprize of *Panama*, was an ill meaſured and immature counſel; for it was grounded upon a falſe account, that the paſſages towards *Panama* were no better fortified than *Drake* had left them. But yet it ſorted not to any fight of importance, but to a retreat, after the *Engliſh* had proved the ſtrength of their firſt fort, and had notice of the two other forts beyond, by which they were to have marched. It is true, that in the return of the *Engliſh* fleet, they were ſet upon by *Avellaneda*, admiral of twenty great ſhips *Spaniſh*, our fleet being but fourteen, full of ſick men, deprived of their two generals by ſea, and having no pretence but to journey homewards: and yet the *Spaniards* did but ſalute them about the cape *de los Corientes*, with ſome ſmall offer of fight, and came off with loſs; although it was ſuch a new thing for the *Spaniards* to receive ſo little hurt upon dealing with the *Engliſh*, as *Avellaneda* made great brags of it, for no greater matter than the waiting upon the *Engliſh* afar off, from cape *de los Corientes* to cape *Antonio*; which nevertheleſs, in the language of a ſoldier, and of a *Spaniard*, he called a chace.

But before I proceed farther, it is good to meet with an objection, which if it be not removed, the concluſion of experience from the time paſt, to the time preſent, will not be ſound and perfect. For it will be ſaid, that

in the former times, (whereof we have ſpoken) *Spain* was not ſo mighty as now it is; and *England* on the other ſide was more aforehand in all matters of power. Therefore let us compare with indifferency theſe diſparities of times, and we ſhall plainly perceive, that they make for the advantage of *England* at this preſent time. And becauſe we will leſs wander in generalities, we will fix the compariſon to preciſe times; comparing the ſtate of *Spain* and *England* in the year 88, with this preſent year that now runneth. In handling this point, I will not meddle with any perſonal compariſons of the princes, counſellors, and commanders by ſea or land, that were then, and that are now, in both kingdoms, *Spain* and *England*; but only reſt upon real points, for the true balancing of the ſtate of the forces and affairs of both times. And yet theſe perſonal compariſons I omit not, but that I could evidently ſhew, that even in theſe perſonal reſpects, the balance ſways on our part: but becauſe I would ſay nothing that may ſavour of a ſpirit of flattery or cenſures of the preſent government.

First therefore it is certain, that *Spain* hath not now a foot of ground in quiet poſſeſſion, more than it had in 88. As for the *Valtoline*, and the *Palatinate*, it is a maxim in ſtate, that all countries of new acqueſt, till they be ſettled, are rather matters of burden than of ſtrength. On the other ſide, *England* hath *Scotland* united, and *Ireland* reduced to obedience, and planted; which are mighty augmentations.

Secondly, in 88, the kingdom of *France*, able alone to counterpoiſe *Spain* it ſelf, (much more in conjunction) was torn with the party of the league, which gave law to their king, and depended wholly upon *Spain*. Now *France* is united under a valiant young king, generally obeyed if he will himſelf, king of *Navarre* as well as of *France*; and that is no ways taken priſoner, though he be tied in a double chain of alliance with *Spain*.

Thirdly, in 88, there ſate in the ſee of *Rome* a fierce thundring friar, that would ſet all at ſix and ſeven; or at ſix and five, if you allude to his name: And though he would after have turned his teeth upon *Spain*, yet he was taken order with before it came to that. Now there is aſcended to the papacy, a perſonage, that came in by a chaſte election, no ways obliged to the party of the *Spaniards:* a man bred in embaſſages and affairs of ſtate, that hath much of the prince, and nothing of the friar: and one, that though he loves the chair of the papacy well, yet he loveth the carpet above the chair; that is, *Italy*, and the liberties thereof well likewiſe.

Fourthly, in 88, the king of *Denmark* was a ſtranger to *England*, and rather inclined to *Spain*; now the king is incorporated to the blood of *England*, and engaged in the quarrel of the *Palatinate*. Then alſo *Venice*, *Savoy*, and the princes and cities of *Germany*, had but a dull fear of the greatneſs of *Spain*, upon a general apprehenſion only of the ſpreading and ambitious deſigns of that nation: now that fear is ſharpened and pointed, by the *Spaniards* late enterprizes upon the *Valtoline* and the *Palatinate*, which come nearer them.

Fifthly and laſtly, the *Dutch* (which is the *Spaniards* perpetual duelliſt) hath now, at this preſent, five ſhips to one, and the like proportion in treaſure and wealth, to that they had in 88. Neither is it poſſible (whatſoever is given out) that the coffers of *Spain* ſhould now be fuller than they were in 88: for at that time *Spain* had no other wars ſave thoſe of the Low Countries, which were grown into an ordinary; now they have had coupled therewith the extraordinary of the *Valtoline*, and the *Palatinate*. And ſo I conclude my anſwer to the objection raiſed, touching the difference

of

of times; not entring into more ſecret paſſages of ſtate, but keeping that character of ſtyle whereof *Seneca* ſpeaketh, *plus ſignificat quam loquitur.*

Here I would paſs over from matter of experience, were it not that I held it neceſſary to diſcover a wonderful erroneous obſervation that walketh about, and is commonly received, contrary to all the true account of time and experience. It is, that the *Spaniard*, where he once getteth in, will ſeldom (or never) be got out again. But nothing is leſs true than this: not long ſince they got footing at *Breſt*, and ſome other parts in *French Britain*, and after quitted them. They had *Calais*, *Ardes*, and *Amiens*, and rendred them, or were beaten out. They had ſince *Marſeilles*, and fairly left it. They had the other day the *Valtoline*, and now have put it in depoſit. What they will do with *Ormus*, which the *Perſian* hath taken from them, we ſhall ſee. So that to ſpeak truly of later times, they have rather poached and offered at a number of enterprizes than maintained any conſtantly, quite contrary to that idle tradition. In more ancient times, (leaving their purchaſes in *Africk*, which they after abandoned) when their great emperor *Charles* had claſped *Germany* (almoſt) in his fiſt, he was forced in the end to go from *Isburg*, (and as if it had been in a maſk, by torch-light) and to quit every foot in *Germany* round that he had gotten; which I doubt not will be the hereditary iſſue of this late purchaſe of the *Palatinate*. And ſo I conclude the ground that I have to think, that *Spain* will be no overmatch to *Great Britain*, if his majeſty ſhould enter into a war out of experience, and the records of time.

For grounds of reaſon they are many; I will extract the principal, and open them briefly, and (as it were) in the bud. For ſituation I paſs it over; though it be no ſmall point: *England*, *Scotland*, *Ireland*, and our good confederates the United Provinces, lie all in a plump together, not acceſſible but by ſea, or at leaſt by paſſing of great rivers, which are natural fortifications. As for the dominions of *Spain*, they are ſo ſcattered, as it yieldeth great choice of the ſcenes of the war, and promiſeth ſlow ſuccours unto ſuch part as ſhall be attempted. There be three main parts of military puiſſance, men, money, and confederates. For men, there are to be conſidered valour and number. Of valour I ſpeak not; take it from the witneſſes that have been produced before: yet the old obſervation is not untrue, that the *Spaniards* valour lieth in the eye of the looker on; but the *Engliſh* valour lieth about the ſoldiers heart. A valour of glory, and a valour of natural courage, are two things. But let that paſs, and let us ſpeak of number: *Spain* is a nation thin ſown of people; partly by reaſon of the ſterility of the ſoil, and partly becauſe their natives are exhauſted by ſo many employments in ſuch vaſt territories as they poſſeſs. So that it hath been counted a kind of miracle, to ſee ten or twelve thouſand native *Spaniards* in an army. And it is certain, (as we have touched it a little before in paſſage) that the ſecret of the power of *Spain* conſiſteth in a veteran army, compounded of miſcellany forces of all nations, which for many years they have had on foot upon one occaſion or other: and if there ſhould happen the misfortune of a battel, it would be a long work to draw on ſupplies. They tell a tale of a *Spaniſh* embaſſador that was brought to ſee the treaſury of S. *Mark* at *Venice*, and ſtill he looked down to the ground; and being aſked, why he ſo looked down, ſaid, he was looking to ſee whether their treaſure had any root, (ſo that if it were ſpent it would grow again) as his maſter's had. But howſoever it be of their treaſure, certainly their forces have ſcarce any root; or at leaſt ſuch a root as bud-

deth forth poorly and ſlowly. It is true they have the *Walloons*, who are tall ſoldiers; yet that is but a ſpot of ground. But on the other ſide, there is not in the world again ſuch a ſpring and ſeminary of brave military people, as is *England*, *Scotland*, *Ireland*, and the United Provinces: So as if wars ſhould mow them down never ſo faſt, yet they may be ſuddenly ſupplied, and come up again.

For money, no doubt it is the principal part of the greatneſs of *Spain*; for by that they maintain their veteran army; and *Spain* is the only ſtate of *Europe* that is a money grower. But in this part, of all others, is moſt to be conſidered, the tickliſh and brittle ſtate of the greatneſs of *Spain*. Their greatneſs conſiſteth in their treaſure, their treaſure in their *Indies*, and their *Indies* (if it be well weighed) are indeed but an acceſſion to ſuch as are maſters by ſea. So as this axle-tree, whereupon their greatneſs turneth, is ſoon cut in two by any that ſhall be ſtronger than they by ſea. Herein therefore I refer my ſelf to the opinions of all men, (enemies or whomſoever) whether that the maritime forces of *Great Britain*, and the United Provinces, be not able to beat the *Spaniard* at ſea? For if that be ſo, the links of that chain whereby they hold their greatneſs, are diſſolved. Now if it be ſaid, that admit the caſe of *Spain* to be ſuch as we have made it, yet we ought to deſcend into our own caſe, which we ſhall find (perhaps) not to be in ſtate (for treaſure) to enter into a war with *Spain*. To which I anſwer; I know no ſuch thing; the mint beateth well; and the pulſes of the peoples hearts beat well. But there is another point that taketh away quite this objection: for whereas wars are generally cauſes of poverty, or conſumption; on the contrary part, the ſpecial nature of this war with *Spain*, (if it be made by ſea) is like to be a lucrative and reſtorative war. So that if we go roundly on at the firſt, the war in continuance will find it ſelf. And therefore you muſt make a great difference between *Hercules'* labours by land, and *Jaſon's* voyage by ſea for the golden fleece.

For confederates, I will not take upon me the knowledge, how the princes, ſtates, and counſels of *Europe*, at this day, ſtand affected towards *Spain*; for that trencheth into the ſecret occurrents of the preſent time, wherewith in all this treatiſe I have forborn to meddle. But to ſpeak of that which lieth open and in view; I ſee much matter of quarrel and jealouſy, but little of amity and truſt towards *Spain*, almoſt in all other eſtates. I ſee *France* is in competition with them, for three noble portions of their monarchy, *Navarre*, *Naples*, and *Milan*; and now freſhly in difference with them about the *Valtoline*. I ſee once in thirty or forty years cometh a pope, that caſteth his eye upon the kingdom of *Naples*, to recover it to the church: as it was in the minds of *Julius* the ſecond, *Paul* the fourth, and *Sixtus* the fifth. As for that great Body of *Germany*, I ſee they have greater reaſon to confederate themſelves with the kings of *France*, and *Great Britain*, or *Denmark*, for the liberty of the *German* nation, and for the expulſion of *Spaniſh* and foreign forces, than they had in the years 1552 and 1553. At which time they contracted a league with *Henry* the ſecond the *French* king, upon the ſame articles againſt *Charles* the fifth, who had impatronized himſelf of a great part of *Germany*, through diſcord of the *German* princes, which himſelf had ſown and fomented; which league at that time did the deed, and drave out all the *Spaniards* out of that part of *Germany*; and reintegrated that nation in their ancient liberty and honour. For the *Weſt Indies*, though *Spain* hath had yet not much actual diſturbance there, except it have been from *England*; yet nevertheleſs I ſee all princes lay a kind

kind of claim unto them; accounting the title of *Spain* but as a monopoly of thoſe large countries, wherein they have in great part but an imaginary poſſeſſion. For *Africk* upon the weſt, the *Moors* of *Valentia* expulſed, and their allies do yet hang as a cloud or ſtorm over *Spain*. *Gabor* on the eaſt is like an anniverſary wind, that riſeth every year once upon the party of *Auſtria*. And *Perſia* hath entred into hoſtility with *Spain*, and given them the firſt blow by taking of *Ormus*. It is within every man's obſervation alſo, that *Venice* doth think their ſtate almoſt on fire, if the *Spaniards* hold the *Valtoline*. That *Savoy* hath learned by freſh experience, that alliance with *Spain* is no ſecurity againſt the ambition of *Spain*; and that of *Bavaria* hath likewiſe been taught, that merit and ſervice doth oblige the *Spaniard* but from day to day. Neither do I ſay for all this, but that *Spain* may rectify much of this ill blood by their particular and cunning negotiations: but yet there it is in the body, and may break out, no man knoweth when, into all accidents: and at leaſt it ſheweth plainly that which ſerveth for our purpoſe, that *Spain* is much deſtitute of aſſured and confident confederates. And therefore I will conclude this part with the ſpeech of a counſellor of ſtate in *Spain*, at this day, which was not without ſalt: He ſaid to his maſter the king of *Spain* that now is, upon occaſion; Sir, I will tell your majeſty thus much for your comfort; your majeſty hath but two enemies, whereof the one is all the world, and the other is your own miniſters. And thus I end the ſecond main part I propounded to ſpeak of; which was, the balancing of the forces between the king's majeſty and the king of *Spain*, if a war muſt follow.

AN

# AN ADVERTISEMENT TOUCHING AN HOLY WAR.

Written in the Year 1622.

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To the Right Reverend Father in God,

*Lancelot Andrews* Lord Biſhop of *Wincheſter*, and Counſellor of Eſtate to his Majeſty.

My Lord,

AMONGST conſolations, it is not the leaſt to repreſent to a man's ſelf, like examples of calamity in others. For examples give a quicker impreſſion than arguments; and beſides, they certify us that which the ſcripture alſo tendreth for ſatisfaction; *that no new thing is happened unto us.* This they do the better, by how much the examples are liker in circumſtances to our own caſe; and more eſpecially if they fall upon perſons that are greater and worthier than our ſelves. For as it ſavoureth of vanity, to match our ſelves highly in our own conceit; ſo on the other ſide it is a good ſound concluſion, that if our betters have ſuſtained the like events, we have the leſs cauſe to be grieved.

In this kind of conſolation I have not been wanting to my ſelf: though as a Chriſtian, I have taſted (through God's great goodneſs) of higher remedies. Having therefore, through the variety of my reading, ſet before me many examples both of ancient and later times, my thoughts (I confeſs) have chiefly ſtayed upon three particulars, as the moſt eminent and the moſt reſembling. All three perſons that had held chief place of authority in their countries; all three ruined, not by war, or by any other diſaſter, but by juſtice and ſentence, as delinquents and criminals; all three famous writers, inſomuch as the remembrance of their calamity is now as to poſterity but as a little picture of night-work, remaining amongſt the fair and excellent tables of their acts and works: And all three (if that were any thing to the matter) fit examples to quench any man's ambition of riſing again;

again; for that they were every one of them reſtored with great glory, but to their farther ruin and deſtruction, ending in a violent death. The men were, *Demoſthenes*, *Cicero*, and *Seneca*; perſons that I durſt not claim affinity with, except the ſimilitude of our fortunes had contracted it. When I had caſt mine eyes upon theſe examples, I was carried on farther to obſerve, how they did bear their fortunes, and principally, how they did employ their times being baniſhed, and diſabled for publick buſineſs: to the end, that I might learn by them; and that they might be as well my counſellors as my comforters. Whereupon I happened to note, how diverſly their fortunes wrought upon them, eſpecially in that point at which I did moſt aim, which was the employing of their times and pens. In *Cicero*, I ſaw that during his baniſhment, (which was almoſt two years) he was ſo ſoftened and dejected, as he wrote nothing but a few womaniſh epiſtles. And yet, in mine opinion, he had leaſt reaſon of the three to be diſcouraged: for that although it was judged, and judged by the higheſt kind of judgment, in form of a ſtatute, or law, that he ſhould be baniſhed, and his whole eſtate confiſcated and ſeized, and his houſes pulled down, and that it ſhould be highly penal for any man to propound a repeal; yet his caſe even then had no great blot of ignominy; for it was thought but a tempeſt of popularity which overthrew him. *Demoſthenes* contrariwiſe, though his caſe was foul, being condemned for bribery; and not ſimple bribery, but bribery in the nature of treaſon and diſloyalty; yet nevertheleſs took ſo little knowledge of his fortune, as during his baniſhment he did much buſy himſelf, and intermeddle with matters of ſtate; and took upon him to counſel the ſtate (as if he had been ſtill at the helm) by letters; as appears by ſome epiſtles of his which are extant. *Seneca* indeed, who was condemned for many corruptions and crimes, and baniſhed into a ſolitary iſland, kept a mean; and though his pen did not freeze, yet he abſtained from intruding into matters of buſineſs; but ſpent his time in writing books of excellent argument and uſe for all ages; though he might have made better choice (ſometimes) of his dedications.

These examples confirmed me much in a reſolution (whereunto I was otherwiſe inclined) to ſpend my time wholly in writing; and to put forth that poor talent, or half talent, or what it is that God hath given me, not as heretofore to particular exchanges, but to banks, or mounts of perpetuity, which will not break. Therefore having not long ſince ſet forth a part of my inſtauration; which is the work, that in mine own judgment *(ſi nunquam fallit imago)* I do moſt eſteem; I think to proceed in ſome new parts thereof. And although I have received from many parts beyond the ſeas, teſtimonies touching that work, ſuch as beyond which I could not expect at the firſt in ſo abſtruſe an argument; yet nevertheleſs I have juſt cauſe to doubt, that it flies too high over mens heads: I have a purpoſe therefore (though I break the order of time) to draw it down to the ſenſe, by ſome patterns of a natural ſtory and inquiſition. And again, for that my book of advancement of learning, may be ſome preparative, or key, for the better opening of the inſtauration; becauſe it exhibits a mixture of new conceits and old; whereas the inſtauration gives the new unmixed, otherwiſe than with ſome little aſperſion of the old for taſte's ſake; I have thought good to procure a tranſlation of that book into the general language, not without great and ample additions, and enrichment thereof, eſpecially in the ſecond book, which handleth the partition of ſciences; in ſuch ſort as I hold it may ſerve, in lieu of the firſt part of the inſtauration, and acquit my promiſe

miſe in that part. Again, becauſe I cannot altogether deſert the civil perſon that I have born; which if I ſhould forget, enough would remember; I have alſo entred into a work touching laws, propounding a character of juſtice in a middle term, between the ſpeculative and reverend diſcourſes of philoſophers, and the writings of lawyers, which are tied and obnoxious to their particular laws. And although it be true, that I had a purpoſe to make a particular digeſt, or recompilement of the laws of mine own nation; yet becauſe it is a work of aſſiſtance, and that which I cannot maſter by my own forces and pen, I have laid it aſide. Now having in the work of my inſtauration had in contemplation the general good of men in their very being, and the dowries of nature; and in my work of laws, the general good of men likewiſe in ſociety, and the dowries of government; I thought in duty I owed ſomewhat unto my own countrey, which I ever loved; inſomuch as although my place hath been far above my deſert, yet my thoughts and cares concerning the good thereof, were beyond, and over, and above my place: ſo now being (as I am) no more able to do my countrey ſervice, it remained unto me to do it honour: which I have endeavoured to do in my work of the reign of king *Henry* the ſeventh. As for my eſſays, and ſome other particulars of that nature, I count them but as the recreations of my other ſtudies, and in that ſort purpoſe to continue them; though I am not ignorant that thoſe kind of writings would, with leſs pains and embracement (perhaps) yield more luſtre and reputation to my name, than thoſe other which I have in hand. But I account the uſe that a man ſhould ſeek of the publiſhing of his own writings before his death, to be but an untimely anticipation of that which is proper to follow a man, and not to go along with him.

But revolving with my ſelf my writings, as well thoſe which I have publiſhed, as thoſe which I had in hand, methought they went all into the city, and none into the temple; where becauſe I have found ſo great conſolation, I deſire likewiſe to make ſome poor oblation. Therefore I have choſen an argument, mixt of religious and civil conſiderations; and likewiſe mixt between contemplative and active. For who can tell whether there may not be an *exoriere aliquis?* Great matters (eſpecially if they be religious) have (many times) ſmall beginnings; and the platform may draw on the building. This work, becauſe I was ever an enemy to flattering dedications, I have dedicated to your lordſhip, in reſpect of our ancient and private acquaintance; and becauſe amongſt the men of our times I hold you in ſpecial reverence.

*Your lordſhip's loving friend,*

Fr. St. Alban.

# AN ADVERTISEMENT TOUCHING AN HOLY WAR.

## The Perſons that ſpeak.

EUSEBIUS, GAMALIEL, ZEBEDÆUS, MARTIUS, EUPOLIS, POLLIO.

THERE met at *Paris* (in the houſe of *Eupolis*) * *Euſebius*, *Zebedæus*, *Gamaliel*, *Martius*, all perſons of eminent quality, but of ſeveral diſpoſitions. *Eupolis* himſelf was alſo preſent; and while they were ſet in conference, *Pollio* came in to them from court; and as ſoon as he ſaw them, after his witty and pleaſant manner, he ſaid.

POLLIO. Here be four of you, I think, were able to make a good world; for you are as differing as the four elements, and yet you are friends. As for *Eupolis*, becauſe he is temperate, and without paſſion, he may be the fifth eſſence. *Eupolis*. If we five (*Pollio*) make the great world, you alone make the little; becauſe you profeſs and practiſe both, to refer all things to your ſelf. *Pollio*. And what do they that practiſe it, and profeſs it not? *Eupolis*. They are the leſs hardy, and the more dangerous. But come and ſit down with us, for we were ſpeaking of the affairs of Chriſtendom at this day; wherein we would be glad alſo to have your opinion. *Pollio*. My lords, I have journeyed this morning, and it is now the heat of the day; therefore your lordſhips diſcourſes had need content my ears very well, to make them entreat mine eyes to keep open. But yet if you will give me leave to awake you, when I think your diſcourſes do but ſleep, I will keep watch the beſt I can. *Eupolis*. You cannot do us a greater favour. Only I fear you will think all our diſcourſes to be but the better ſort of dreams; for good wiſhes, without power to effect, are not much more. But, ſir, when you came in, *Martius* had both raiſed our attentions, and affected us with ſome ſpeech he had begun; and it falleth out well, to ſhake off your drowſineſs; for it ſeemed to be the trumpet of a

* Characters of the perſons. *Euſebius* beareth the character of a moderate divine: *Gamaliel* of a proteſtant zealot: *Zebedæus* of a *Roman* Catholick zealot: *Martius* of a military man: *Eupolis* of a politick: *Pollio* of a courtier.

war. And therefore, *(Martius)* if it pleaſe you, to begin again; for the ſpeech was ſuch, as deſerveth to be heard twice; and I aſſure you, your auditory is not a little amended by the preſence of *Pollio*. *Martius*. When you came in *(Pollio)* I was ſaying freely to theſe lords, that I had obſerved, how by the ſpace now of half a century of years, there had been (if I may ſpeak it) a kind of meanneſs in the deſigns and enterpriſes of Chriſtendom. Wars with ſubjects, like an angry ſuit for a man's own, that might be better ended by accord. Some petty acqueſts of a town, or ſpot of territory; like a farmer's purchaſe of a cloſe or nook of ground, that lay fit for him. And although the wars had been for a *Naples*, or a *Milan*, or a *Portugal*, or a *Bohemia*, yet theſe wars were but as the wars of heathens, (of *Athens*, or *Sparta*, or *Rome*,) for ſecular intereſts, or ambition, not worthy the warfare of Chriſtians. The Church (indeed) maketh her miſſions into the extreme parts of the nations and iſles, and it is well: but this is, *ecce unus gladius hic*. The Chriſtian princes and potentates, are they that are wanting to the propagation of the faith by their arms. Yet our Lord, that ſaid on earth, to the diſciples, *Ite & praedicate*, ſaid from heaven to *Conſtantine*, *in hoc ſigno vince*. What Chriſtian ſoldier is there, that will not be touched with a religious emulation, to ſee an order of *Jeſus*, or of St. *Francis*, or of St. *Auguſtine*, do ſuch ſervice, for enlarging the Chriſtian borders; and an order of St. *Iago*, or St. *Michael*, or St. *George*, only to robe, and feaſt, and perform rites and obſervances? Surely the merchants themſelves ſhall riſe in judgment againſt the princes and nobles of *Europe*; for they have made a great path in the ſeas, unto the ends of the world; and ſet forth ſhips, and forces, of *Spaniſh*, *Engliſh* and *Dutch*, enough to make *China* tremble; and all this, for pearl, or ſtone, or ſpices: but for the pearl of the kingdom of heaven, or the ſtones of the heavenly *Jeruſalem*, or the ſpices of the ſpouſe's garden, not a maſt hath been ſet up: nay, they can make ſhift to ſhed Chriſtian blood ſo far off amongſt themſelves, and not a drop for the cauſe of *Chriſt*. But let me recall my ſelf; I muſt acknowledge, that within the ſpace of fifty years (whereof I ſpake) there have been three noble and memorable actions upon the infidels, wherein the Chriſtian hath been the invader: for where it is upon the defenſive, I reckon it a war of nature, and not of piety. The firſt was, that famous and fortunate war by ſea, that ended in the victory of *Lepanto*; which hath put a hook into the noſtrils of the *Ottomans* to this day; which was the work (chiefly) of that excellent pope *Pius Quintus*, whom I wonder his ſucceſſors have not declared a ſaint. The ſecond was, the noble, though unfortunate, expedition of *Sebaſtian* king of *Portugal* upon *Africa*, which was atchieved by him alone; ſo alone, as left ſomewhat for others to excuſe. The laſt was, the brave incurſions of *Sigiſmund* the *Tranſylvanian* prince, the thread of whoſe proſperity was cut off by the Chriſtians themſelves, contrary to the worthy and paternal monitories of pope *Clement* the eighth. More than theſe, I do not remember. *Pollio*. No! What ſay you to the extirpation of the *Moors* of *Valentia?* At which ſudden queſtion, *Martius* was a little at a ſtop; and *Gamaliel* prevented him, and ſaid; *Gamaliel*. I think *Martius* did well in omitting that action, for I, for my part, never approved it; and it ſeems, God was not well pleaſed with the deed; for you ſee the king, in whoſe time it paſſed, (whom you catholicks count a ſaint-like and immaculate prince,) was taken away in the flower of his age: and the author, and great counſellor of that rigour (whoſe fortunes ſeemed to be built upon the rock) is ruined: and it is thought by ſome, that the reckonings of that buſineſs are

not

not yet cleared with *Spain*; for that numbers of thoſe ſuppoſed *Moors*, being tried now by their exile, continue conſtant in the faith, and true Chriſtians in all points, ſave in the thirſt of revenge. *Zebed.* Make not haſty judgment (*Gamaliel*) of that great action, which was as *Chriſt*'s fan in thoſe countries, except you could ſhew ſome ſuch covenant from the crown of *Spain*, as *Joſhua* made with the *Gibeonites*; that that curſed ſeed ſhould continue in the land. And you ſee it was done by edict, not tumultuouſly; the ſword was not put into the peoples hand. *Eupol.* I think *Martius* did omit it, not as making any judgment of it either way, but becauſe it ſorted not aptly with action of war, being upon ſubjects, and without reſiſtance. But let us, if you think good, give *Martius* leave to proceed in his diſcourſe; for methought he ſpake like a divine in armour. *Martius.* It is true, *Eupolis*, that the principal object which I have before mine eyes, in that whereof I ſpeak, is piety and religion. But nevertheleſs, if I ſhould ſpeak only as a natural man, I ſhould perſuade the ſame thing. For there is no ſuch enterprize, at this day, for ſecular greatneſs, and terrene honour, as a war upon infidels. Neither do I in this propound a novelty, or imagination, but that which is proved by late examples of the ſame kind, tho' perhaps of leſs difficulty. The *Caſtilians*, the age before that wherein we live, opened the new world; and ſubdued and planted *Mexico*, *Peru*, *Chili*, and other parts of the *Weſt-Indies*. We ſee what floods of treaſure have flowed into *Europe* by that action; ſo that the cenſe or rates of Chriſtendom are raiſed ſince ten times, yea twenty times told. Of this treaſure, it is true, the gold was accumulate, and ſtore treaſure, for the moſt part; but the ſilver is ſtill growing. Beſides, infinite is the acceſs of territory and empire, by the ſame enterprize. For there was never an hand drawn, that did double the reſt of the habitable world, before this; for ſo a man may truly term it, if he ſhall put to account, as well that that is, as that which may be hereafter, by the farther occupation and colonizing of thoſe countries. And yet it cannot be affirmed, (if one ſpeak ingenuouſly,) that it was the propagation of the Chriſtian faith that was the adamant of that diſcovery, entry, and plantation; but gold and ſilver, and temporal profit, and glory; ſo that what was firſt in God's providence, was but ſecond in man's appetite and intention. The like may be ſaid of the famous navigations and conqueſts of *Emmanuel*, king of *Portugal*, whoſe arms began to circle *Africa* and *Aſia*; and to acquire, not only the trade of ſpices, and ſtones, and muſk, and drugs, but footing, and places, in thoſe extreme parts of the eaſt. For neither in this was religion the principal, but amplification and enlargement of riches and dominion. And the effect of theſe two enterprifes is now ſuch, that both the *Eaſt* and the *Weſt-Indies*, being met in the crown of *Spain*, it is come to paſs, that as one ſaith in a brave kind of expreſſion, the ſun never ſets in the *Spaniſh* dominions, but ever ſhines upon one part or other of them; which, to ſay truly, is a beam of glory, though I cannot ſay it is ſo ſolid a body of glory, wherein the crown of *Spain* ſurpaſſeth all the former monarchies. So as to conclude, we may ſee, that in theſe actions, upon Gentiles or Infidels, only or chiefly, both the ſpiritual and temporal, honour and good, have been in one purſuit and purchaſe conjoined. *Pollio.* Methinks, with your favour, you ſhould remember, (*Martius*) that wild and ſavage people are like beaſts and birds, which are *ferae naturæ*, the property of which paſſeth with the poſſeſſion, and goeth to the occupant; but of civil people, it is not ſo. *Mar.* I know no ſuch difference, amongſt reaſonable ſouls; but that whatſoever is in order

to the greateſt and moſt general good of people, may juſtify the action, be the people more or leſs civil. But *(Eupolis)* I ſhall not eaſily grant, that the people of *Peru*, or *Mexico*, were ſuch brute ſavages as you intend; or that there ſhould be any ſuch difference between them, and many of the infidels: which are now in other parts. In *Peru*, though they were unapparelled people, according to the clime, and had ſome cuſtoms very barbarous, yet the government of the *Incaes* had many parts of humanity and civility. They had reduced the nations from the adoration of a multitude of idols and fancies, to the adoration of the ſun. And, as I remember, the book of *Wiſdom* noteth degrees of idolatry; making that of worſhipping petty and vile idols more groſs, than ſimply the worſhipping of the creature. And ſome of the Prophets, as I take it, do the like, in the metaphor of more ugly and beſtial fornication. The *Peruvians* alſo (under the *Incaes)* had magnificent temples of their ſuperſtition; they had ſtrict and regular juſtice; they bare great faith and obedience to their kings; they proceeded in a kind of martial juſtice with their enemies, offering them their law, as better for their own good, before they drew their ſword. And much like was the ſtate of *Mexico*, being an elective monarchy. As for thoſe people of the eaſt, *(Goa, Calacute, Malacca,)* they were a fine and dainty people; frugal, and yet elegant, though not military. So that if things be rightly weighed, the empire of the *Turks* may be truly affirmed to be more barbarous than any of theſe. A cruel tyranny, bathed in the blood of their emperors upon every ſucceſſion; a heap of vaſſals and ſlaves; no nobles; no gentlemen; no freemen; no inheritance of land; no ſtirp or ancient families; a people that is without natural affection; and, as the ſcripture ſaith, that *regardeth not the deſires of women:* and without piety, or care towards their children: a nation without morality, without letters, arts, or ſciences; that can ſcarce meaſure an acre of land, or an hour of the day: baſe and ſluttiſh in buildings, diets, and the like; and in a word, a very reproach to human ſociety: and yet this nation hath made the garden of the world a wilderneſs; for that, as it is truly ſaid, concerning the *Turks*, where *Ottoman*'s horſe ſets his foot, people will come up very thin. *Pollio.* Yet in the midſt of your invectives *(Martius)* do the *Turks* this right, as to remember that they are no idolaters: for if, as you ſay, there be a difference between worſhipping a baſe idol, and the ſun; there is a much greater difference between worſhipping a creature, and the Creator. For the *Turks* do acknowledge God the Father, Creator of heaven and earth, being the firſt perſon in the Trinity, though they deny the reſt. At which ſpeech, when *Martius* made ſome pauſe, *Zebedaeus* replied with a countenance of great reprehenſion and ſeverity. *Zebed.* We muſt take heed *(Pollio)* that we fall not at unawares into the hereſy of *Manuel Comnenus* emperor of *Graecia*, who affirmed, that *Mahomet*'s God was the true God; which opinion was not only rejected and condemned by the ſynod, but imputed to the emperor as extreme madneſs, being reproached to him alſo by the biſhop of *Theſſalonica*, in thoſe bitter and ſtrange words, as are not to be named. *Martius.* I confeſs that it is my opinion, that a war upon the *Turk* is more worthy than upon any other gentiles, infidels, or ſavages, that either have been, or now are, both in point of religion, and in point of honour; though facility, and hope of ſucceſs, might (perhaps) invite ſome other choice. But before I proceed, both my ſelf would be glad to take ſome breath; and I ſhall frankly deſire, that ſome of your lordſhips would take your turn to ſpeak, that can do it better. But chiefly, for that I ſee here ſome that are excellent interpreters of the divine law, though

though in ſeveral ways; and that I have reaſon to diſtruſt mine own judgment, both as weak in it ſelf, and as that which may be overborn by my zeal and affection to this cauſe. I think it were an error to ſpeak farther, till I may ſee ſome found foundation laid of the lawfulneſs of the action, by them that are better verſed in that argument. *Eupolis.* I am glad *(Martius)* to ſee in a perſon of your profeſſion ſo great moderation, in that you are not tranſported in an action that warms the blood, and is appearing holy to blanch or take for admitted the point of lawfulneſs. And becauſe methinks this conference proſpers, if your lordſhips will give me leave, I will make ſome motion touching the diſtribution of it into parts. Unto which when they all aſſented, *Eupolis* ſaid; *Eupolis.* I think it would not ſort amiſs, if *Zebedaeus* would be pleaſed to handle the queſtion, whether a war for the propagation of the Chriſtian faith, without other cauſe of hoſtility, be lawful or no, and in what caſes? I confeſs alſo I would be glad to go a little farther, and to hear it ſpoken to concerning the lawfulneſs, not only permiſſively, but whether it be not obligatory to Chriſtian princes and ſtates to deſign it: which part, if it pleaſe *Gamaliel* to undertake, the point of the lawfulneſs taken ſimply will be compleat. Yet there reſteth the comparative: that is, its being granted, that it is either lawful or binding, yet whether other things be not to be preferr'd before it; as extirpation of hereſies, reconcilements of ſchiſms, purſuit of lawful temporal rights and quarrels, and the like; and how far this enterprize ought either to wait upon theſe other matters, or to be mingled with them, or to paſs by them, and give law to them, as inferior unto it ſelf? And becauſe this is a great part, and *Euſebius* hath yet ſaid nothing, we will by way of mulct or pain, if your lordſhips think good, lay it upon him. All this while, I doubt much that *Pollio*, who hath a ſharp wit of diſcovery towards what is ſolid and real, and what is ſpecious and airy, will eſteem all this but impoſſibilities, and eagles in the clouds: and therefore we ſhall all intreat him to cruſh this argument with his beſt forces; that by the light we ſhall take from him, we may either caſt it away if it be found but a bladder, or diſcharge it of ſo much as is vain and not ſperable. And becauſe I confeſs I myſelf am not of that opinion, although it be an hard encounter to deal with *Pollio*, yet I ſhall do my beſt to prove the enterprize poſſible; and to ſhew how all impediments may be either removed or overcome. And then it will be fit for *Martius* (if we do not deſert it before) to reſume his farther diſcourſe, as well for the perſuaſive, as for the conſult, touching the means, preparations, and all that may conduce unto the enterprize. Yet this is but my wiſh, your lordſhips will put it into better order. They all not only allowed the diſtribution, but accepted the parts: but becauſe the day was ſpent, they agreed to defer it till the next morning. Only *Pollio* ſaid; *Pollio.* You take me right, *(Eupolis)* for I am of opinion, that except you could bray *Chriſtendom* in a mortar, and mould it into a new paſte, there is no poſſibility of an holy war. And I was ever of opinion, that the philoſophers ſtone, and an holy war, were but the rendezvous of crackt brains, that wore their feather in their head, inſtead of their hat. Nevertheleſs, believe me of courteſy, that if you five ſhall be of another mind, eſpecially after you have heard what I can ſay, I ſhall be ready to certify with *Hippocrates*, that *Athens* is mad, and *Democritus* is only ſober. And leſt you ſhould take me for altogether adverſe, I will frankly contribute to the buſineſs now at firſt. Ye, no doubt, will amongſt you deviſe and diſcourſe many ſolemn matters; but do as I ſhall tell you. This pope is decrepid, and

and the bell goeth for him. Take order, that when he is dead, there be choſen a pope of freſh years, between fifty and threeſcore; and ſee that he take the name of *Urban*, becauſe a pope of that name did firſt inſtitute the croiſado; and (as with an holy trumpet) did ſtir up the voyage for the Holy Land. *Eupolis.* You ſay well; but be, I pray you, a little more ſerious in this conference.

THE next day the ſame perſons met as they had appointed; and after they were ſet, and that there had paſſed ſome ſporting ſpeeches from *Pollio*, how the war was already begun; for that (he ſaid) he had dreamt of nothing but *Janizaries*, and *Tartars*, and *Sultans* all the night long: *Martius* ſaid. *Martius.* The diſtribution of this conference, which was made by *Eupolis* yeſternight, and was by us approved, ſeemeth to me perfect, ſave in one point; and that is, not in the number, but in the placing of the parts. For it is ſo diſpoſed, that *Pollio* and *Eupolis* ſhall debate the poſſibility or impoſſibility of the action, before I ſhall deduce the particulars of the means and manner by which it is to be atchieved. Now I have often obſerved in deliberations, that the entring near hand into the manner of performance, and execution of that which is under deliberation, hath quite overturn'd the opinion formerly conceiv'd, of the poſſibility or impoſſibility. So that things, that at the firſt ſhew ſeemed poſſible, by ripping up the performance of them, have been convicted of impoſſibility; and things that on the other ſide have ſhewed impoſſible, by the declaration of the means to affect them, as by a back light have appeared poſſible, the way through them being diſcerned. This I ſpeak, not to alter the order, but only to deſire *Pollio* and *Eupolis* not to ſpeak peremptorily, or concluſively, touching the point of poſſibility, till they have heard me deduce the means of the execution: and that done, to reſerve themſelves at liberty for a reply, after they had before them as it were, a model of the enterprize. This grave and ſolid advertiſement and caution of *Martius* was much commended by them all. Whereupon *Eupolis* ſaid. *Eupolis.* Since *Martius* hath begun to refine that which was yeſternight reſolved; I may the better have leave (eſpecially in the mending of a propoſition, which was mine own) to remember an omiſſion which is more than a miſplacing. For I doubt we ought to have added or inſerted into the point of lawfulneſs, the queſtion, how far an holy war is to be purſued, whether to diſplanting and extermination of people? And again, whether to enforce a new belief, and to vindicate or puniſh infidelity; or only to ſubject the countries and people; and ſo by the temporal ſword, to open a door for the ſpiritual ſword to enter, by perſuaſion, inſtruction, and ſuch means as are proper for ſouls and conſciences? But it may be, neither is this neceſſary to be made a part by it ſelf; for that *Zebedaeus*, in his wiſdom, will fall into it as an incident to the point of lawfulneſs, which cannot be handled without limitations and diſtinctions. *Zebedaeus.* You encourage me (*Eupolis*) in that I perceive, how in your judgment (which I do ſo much eſteem) I ought to take that courſe, which of my ſelf I was purpoſed to do. For as *Martius* noted well, that it is but a looſe thing to ſpeak of poſſibilities, without the particular deſigns; ſo is it to ſpeak of lawfulneſs without the particular caſes. I will therefore firſt of all diſtinguiſh the caſes; though you ſhall give me leave in the handling of them, not to ſever them with too much preciſeneſs; for both it would cauſe needleſs length; and we are not now in arts or methods, but in a conference. It is therefore firſt to be put to queſtion in general, (as *Eupolis* propounded it) whether it be lawful for Chriſtian princes or ſtates, to make an inva-

ſive

ſive war, only and ſimply for the propagation of the faith, without other cauſe of hoſtility or circumſtance, that may provoke and induce the war? Secondly, whether it being made part of the caſe, that the countries were once Chriſtian, and members of the church, and where the golden candleſticks did ſtand, though now they be utterly alienated, and no Chriſtians left; it be not lawful to make a war to reſtore them to the church, as an ancient patrimony of *Chriſt?* Thirdly, if it be made a farther part of the caſe, that there are yet remaining in the countries multitudes of Chriſtians, whether it be not lawful to make a war to free them, and deliver them from the ſervitude of the infidels? Fourthly, whether it be not lawful to make a war, for the purging and recovery of conſecrated places, being now polluted and profaned; as the holy city and ſepulchre, and ſuch other places of principal adoration and devotion? Fifthly, whether it be not lawful to make a war, for the revenge or vindication of blaſphemies and reproaches againſt the Deity and our bleſſed Saviour; or for the effuſion of Chriſtian blood, and cruelties againſt Chriſtians, though ancient, and long ſince paſt; conſidering that God's viſits are without limitation of time; and many times do but expect the fullneſs of the ſin? Sixthy, it is to be conſidered, (as *Eupolis* now laſt well remembred) whether a holy war, (which, as in the worthineſs of the quarrel, ſo in the juſtneſs of the proſecution, ought to exceed all temporal wars) may be purſued, either to the expulſion of people, or the enforcement of conſciences, or the like extremities; or how to be moderated and limited; leſt whilſt we remember we are Chriſtians, we forget that others are men? But there is a point that precedeth all theſe points recited; nay, and in a manner diſchargeth them, in the particular of a war againſt the Turk: which point, I think, would not have come into my thought, but that *Martius* giving us yeſterday a repreſentation of the empire of the Turks, with no ſmall vigour of words, (which you, *Pollio*, called an invective, but was indeed a true charge) did put me in mind of it: and the more I think upon it, the more I ſettle in opinion; that a war, to ſuppreſs that empire, though we ſet aſide the cauſe of religion, were a juſt war. After *Zebedaeus* had ſaid this, he made a pauſe, to ſee whether any of the reſt would ſay any thing: but when he perceived nothing but ſilence, and ſigns of attention, to that he would farther ſay, he proceeded thus.

ZEBEDAEUS. Your lordſhips will not look for a treatiſe from me, but a ſpeech of conſultation; and in that brevity and manner will I ſpeak. Firſt, I ſhall agree, that as the cauſe of a war ought to be juſt, ſo the juſtice of that cauſe ought to be evident; not obſcure, not ſcrupulous. For by the conſent of all laws, in capital cauſes, the evidence muſt be full and clear: and if ſo, where one man's life is in queſtion, what ſay we to a war, which is ever the ſentence of death upon many? We muſt beware therefore how we make a *Moloch*, or an Heathen idol, of our bleſſed Saviour, in ſacrificing the blood of men to him by an unjuſt war. The juſtice of every action conſiſteth in the merits of the cauſe, the warrant of the juriſdiction, and the form of the proſecution. As for the inward intention, I leave it to the court of heaven. Of theſe things ſeverally, as they may have relation to the preſent ſubject of a war againſt infidels; and namely, againſt the moſt potent, and moſt dangerous enemy of the faith, the Turk. I hold, and I doubt not but I ſhall make it plain, (as far as a ſum or brief can make a cauſe plain) that a war againſt the Turk is lawful, both by the laws of nature and nations, and by the law divine, which is the perfection of the other

two.

two. As for the laws positive and civil of the *Romans*, or others whatsoever, they are too small engines to move the weight of this question. And therefore, in my judgment, many of the late schoolmen, though excellent men, take not the right way in disputing this question; except they had the gift of *Navius*, that they could *cotem novacula scindere*, hew stones with pen-knives. First, for the law of nature. The philosopher *Aristotle* is no ill interpreter thereof. He hath set many men on work with a witty speech of *natura dominus*, and *natura servus*; affirming expressly and positively, that from the very nativity, some things are born to rule, and some things to obey: Which oracle hath been taken in divers senses. Some have taken it for a speech of ostentation, to entitle the *Grecians* to an empire over the Barbarians; which indeed was better maintained by his scholar *Alexander*. Some have taken it for a speculative platform, that reason and nature would that the best should govern; but not in any wise to create a right. But for my part, I take it neither for a brag, nor for a wish; but for a truth as he limiteth it. For he saith, that if there can be found such an inequality between man and man, as there is between man and beast, or between soul and body, it investeth a right of government; which seemeth rather an impossible case, than an untrue sentence. But I hold both the judgment true, and the case possible; and such as hath had, and hath a being, both in particular men and nations. But ere we go farther, let us confine ambiguities and mistakings, that they trouble us not. First, to say that the more capable, or the better deserver, hath such right to govern, as he may compulsorily bring under the less worthy, is idle. Men will never agree upon it, who is the more worthy. For it is not only in order of nature, for him to govern that is the more intelligent, as *Aristotle* would have it; but there is no less required for government, courage to protect; and above all, honesty and probity of the will to abstain, from injury. So fitness to govern is a perplexed business. Some men, some nations, excel in the one ability, some in the other. Therefore the position which I intend, is not in the comparative, that the wiser, or the stouter, or the juster nation should govern; but in the privative, that where there is an heap of people (though we term it a kingdom or state) that is altogether unable or indign to govern; there it is a just cause of war for another nation, that is civil or policed, to subdue them: and this though it were to be done by a *Cyrus* or a *Caesar*, that were no Christian. The second mistaking to be banished is, that I understand not this of a personal tyranny, as was the state of *Rome* under a *Caligula*, or a *Nero*, or a *Commodus*; shall the nation suffer for that wherein they suffer? But when the constitution of the state, and the fundamental customs and laws of the same, (if laws they may be called) are against the laws of nature and nations, then, I say, a war upon them is lawful. I shall divide the question into three parts. First, whether there be, or may be any nation or society of men, against whom it is lawful to make a war, without a precedent injury or provocation? Secondly, what are those breaches of the law of nature and nations, which do forfeit and divest all right and title in a nation to govern? And thirdly, whether those breaches of the law of nature and nations, be found in any nation at this day; and namely in the empire of the *Ottomans?* For the first, I hold it clear that such nations, or states, or societies of people, there may be and are. There cannot be a better ground laid to declare this, than to look into the original donation of government. Observe it well, especially the inducement, or preface. Saith God: *let us make man after our own image, and*

*and let him have dominion over the fiſhes of the ſea, and the fowls of the air, and the beaſts of the land*, &c. Hereupon *De Victoria*, and with him ſome others, infer excellently, and extract a moſt true and divine aphoriſm, *non fundatur dominium, niſi in imagine Dei*. Here we have the charter of foundation: it is now the more eaſy to judge of the forfeiture, or reſeizure. Deface the image, and you diveſt the right. But what is this image, and how is it defaced? The poor men of *Lyons*, and ſome fanatical ſpirits, will tell you, that the image of God is purity; and the defacement, ſin. But this ſubverteth all government: neither did *Adam*'s ſin, or the curſe upon it, deprive him of his rule, but left the creatures to a rebellion or reluctation. And therefore if you note it attentively, when this charter was renewed unto *Noah* and his ſons, it is not by the words, *you ſhall have dominion*; but *your fear ſhall be upon all the beaſts of the land, and the birds of the air, and all that moveth*; not regranting the ſovereignty, which ſtood firm; but protecting it againſt the reluctation. The ſound interpreters therefore expound this image of God, of natural reaſon; which if it be totally or moſtly defaced, the right of government doth ceaſe: and if you mark all the interpreters well, ſtill they doubt of the caſe, and not of the law. But this is properly to be ſpoken to in handling the ſecond point, when we ſhall define of the defacements. To go on: The prophet *Hoſea*, in the perſon of God, ſaith of the *Jews*; *they have reigned, but not by me; they have ſet a ſeigniory over themſelves, but I knew nothing of it*. Which place proveth plainly, that there are governments which God doth not avow. For though they be ordained by his ſecret providence, yet they are not knowledged by his revealed will. Neither can this be meant of evil governors or tyrants: for they are often avowed and eſtabliſhed, as lawful potentates; but of ſome perverſeneſs and defection in the very nation it ſelf; which appeareth moſt manifeſtly in that the Prophet ſpeaketh of the ſeigniory *in abſtracto*, and not of the perſon of the Lord. And although ſome hereticks of thoſe we ſpake of have abuſed this text, yet the ſun is not ſoiled in paſſage. And again, if any man infer upon the words of the Prophet's following, (which declare this rejection, and to uſe the words of the text, reſciſſion of their eſtate to have been for their idolatry) that by this reaſon the governments of all idolatrous nations ſhould be alſo diſſolved, (which is manifeſtly untrue;) in my judgment it followeth not. For the idolatry of the *Jews* then, and the idolatry of the Heathen then and now, are ſins of a far differing nature, in regard of the ſpecial covenant, and the clear manifeſtations wherein God did contract and exhibit himſelf to that nation. This nullity of policy, and right of eſtate in ſome nations, is yet more ſignificantly expreſſed by *Moſes* in his canticle; in the perſon of God to the *Jews: ye have incenſed me with Gods that are no Gods, and I will incenſe you with a people that are no people*: Such as were (no doubt) the people of *Canaan*, after *ſeiſin* was given of the land of promiſe to the *Iſraelites*. For from that time their right to the land was diſſolved, though they remained in many places unconquered. By this we may ſee, that there are nations in name, that are no nations in right; but multitudes only, and ſwarms of people. For like as there are particular perſons outlawed and proſcribed by civil laws of ſeveral countries; ſo are there nations that are outlawed and proſcribed by the law of nature and nations, or by the immediate commandment of God. And as there are kings *de facto*, and not *de jure*, in reſpect of the nullity of their title; ſo are there nations, that are occupants *de facto*, and not *de jure*, of their territories, in reſpect of the nullity of their policy or govern-

ment. But let us take in ſome examples into the midſt of our proofs; for they will prove as much as put after, and illuſtrate more. It was never doubted, but a war upon pirates may be lawfully made by any nation, though not infeſted or violated by them. Is it becauſe they have not *certas ſedes*, or *lares?* In the piratical war, which was atchieved by *Pompey* the great, and was his trueſt and greateſt glory; the pirates had ſome cities, ſundry ports, and a great part of the province of *Cilicia*; and the pirates now being, have a receptacle and manſion in *Algiers*. Beaſts are not the leſs ſavage becauſe they have dens. Is it becauſe the danger hovers as a cloud, that a man cannot tell where it will fall? And ſo it is every man's caſe. The reaſon is good, but it is not all, nor that which is moſt alleged. For the true received reaſon is, that pirates are *communes humani generis hoſtes*; whom all nations are to proſecute, not ſo much in the right of their own fears, as upon the band of human ſociety. For as there are formal and written leagues, reſpective to certain enemies; ſo is there a natural and tacite confederation amongſt all men, againſt the common enemy of human ſociety. So as there needs no intimation, or denunciation of the war; there needs no requeſt from the nation grieved; but all theſe formalities the law of nature ſupplies in the caſe of pirates. The ſame is the caſe of rovers by land; ſuch as yet are ſome cantons in *Arabia*, and ſome petty kings of the mountains, adjacent to ſtraits and ways. Neither is it lawful only for the neighbour princes to deſtroy ſuch pirates or rovers, but if there were any nation never ſo far off, that would make it an enterprize of merit and true glory, (as the *Romans* that made a war for the liberty of *Graecia* from a diſtant and remote part) no doubt they might do it. I make the ſame judgment of that kingdom of the aſſaſſins now deſtroyed, which was ſituate upon the borders of *Saraca*; and was for a time a great terror to all the princes of the *Levant*. There the cuſtom was, that upon the commandment of their king, and a blind obedience to be given thereunto, any of them was to undertake, in the nature of a votary, the inſidious murder of any prince, or perſon, upon whom the commandment went. This cuſtom, without all queſtion, made their whole government void, as an engine built againſt human ſociety, worthy by all men to be fired and pulled down. I ſay the like of the anabaptiſts of *Munſter*; and this although they had not been rebels to the empire: and put caſe likewiſe that they had done no miſchief at all actually, yet if there ſhall be a congregation and conſent of people, that ſhall hold all things to be lawful, not according to any certain laws or rules, but according to the ſecret and variable motions and inſtincts of the ſpirit; this is indeed no nation, no people, no ſeigniory, that God doth know: any nation that is civil and policed, may (if they will not be reduced) cut them off from the face of the earth. Now let me put a feigned caſe, (and yet antiquity makes it doubtful, whether it were fiction or hiſtory) of a land of *Amazons*, where the whole government publick and private, yea, the militia it ſelf, was in the hands of women. I demand, is not ſuch a prepoſterous government (againſt the firſt order of nature, for women to rule over men) in it ſelf void, and to be ſuppreſſed? I ſpeak not of the reign of women, (for that is ſupplied by counſel, and ſubordinate magiſtrates maſculine) but where the regiment of ſtate, juſtice, families, is all managed by women. And yet this laſt caſe differeth from the other before, becauſe in the reſt there is terror of danger, but in this there is only error of nature. Neither ſhould I make any great difficulty to affirm the ſame of the ſultanry of the *Mamalukes*; where ſlaves, and none but ſlaves,

bought

bought for money, and of unknown deſcent, reigned over families of freemen. And much like were the caſe, if you ſuppoſe a nation, where the cuſtom were, that after full age, the ſons ſhould expulſe their fathers and mothers out of their poſſeſſions, and put them to their penſions: for theſe caſes, of women to govern men, ſons the fathers, ſlaves freemen, are much in the ſame degree; all being total violations and perverſions of the laws of nature and nations. For the *Weſt Indies*, I perceive *(Martius)* you have read *Garcilazzo de Viega*, who himſelf was deſcended of the race of the *Incaes*, a *Meſtizo*, and is willing to make the beſt of the virtues and manners of his countrey: and yet in troth he doth it ſoberly and credibly enough. Yet you ſhall hardly edify me, that thoſe nations might not by the law of nature have been ſubdued by any nation, that had only policy and moral virtue; though the propagation of the faith (whereof we ſhall ſpeak in the proper place) were ſet by, and not made part of the caſe. Surely their nakedneſs (being with them in moſt parts of that countrey, without all vail or covering) was a great defacement: for in the acknowledgment of nakedneſs, was the firſt ſenſe of ſin; and the hereſy of the *Adamites* was ever accounted an affront of nature. But upon theſe I ſtand not; nor yet upon their idiocy, in thinking that horſes did eat their bits, and letters ſpeak, and the like: Nor yet upon their ſorceries, which are (almoſt) common to all idolatrous nations. But, I ſay, their ſacrificing, and more eſpecially their eating of men, is ſuch an abomination, as (methinks) a man's face ſhould be a little confuſed, to deny, that this cuſtom joined with the reſt, did not make it lawful for the *Spaniards* to invade their territory, forfeited by the law of nature; and either to reduce them or diſplant them. But far be it from me, yet nevertheleſs, to juſtify the cruelties which were at firſt uſed towards them, which had their reward ſoon after, there being not one of the principal of the firſt conquerors, but died a violent death himſelf; and was well followed by the deaths of many more. Of examples enough: except we ſhould add the labours of *Hercules*; an example, which though it be flouriſhed with much fabulous matter, yet ſo much it hath, that it doth notably ſet forth the conſent of all nations and ages, in the approbation of the extirpating and debellating of giants, monſters, and foreign tyrants, not only as lawful, but as meritorious even of divine honour: And this although the deliverer came from the one end of the world unto the other. Let us now ſet down ſome arguments to prove the ſame; regarding rather weight than number, as in ſuch a conference as this is fit. The firſt argument ſhall be this. It is a great error, and a narrowneſs or ſtraitneſs of mind, if any man think, that nations have nothing to do one with another, except there be either an union in ſovereignty, or a conjunction in pacts or leagues. There are other bands of ſociety, and implicit confederations. That of colonies, or tranſmigrants, towards their mother nation. *Gentes unius labii* is ſomewhat; for as the confuſion of tongues was a mark of ſeparation, ſo the being of one language is a mark of union. To have the ſame fundamental laws and cuſtoms in chief is yet more, as it was between the *Graecians* in reſpect of the Barbarians. To be of one ſect or worſhip; if it be a falſe worſhip, I ſpeak not of it, for that is but *fratres in malo*. But above all theſe, there is the ſupreme and indiſſoluble conſanguinity and ſociety between men in general: of which the heathen poet (whom the Apoſtle calls to witneſs) ſaith, *we are all his generation*. But much more we Chriſtians, unto whom it is revealed in particularity, that all men came from one lump of

earth; and that two ſingular perſons were the parents from whom all the generations of the world are deſcended. We (I ſay) ought to acknowledge, that no nations are wholly aliens and ſtrangers the one to the other: and not to be leſs charitable, than the perſon introduced by the comick poet, *homo ſum, humani nihil a me alienum puto.* Now if there be ſuch a tacit league or confederation, ſure it is not idle; it is againſt ſomewhat, or ſomebody: who ſhould they be? Is it againſt wild beaſts; or the elements of fire and water? No, it is againſt ſuch routs and ſhoals of people, as have utterly degenerated from the laws of nature; as have in their very body and frame of eſtate, a monſtroſity; and may be truly accounted (according to the examples we have formerly recited) common enemies and grievances of mankind; or diſgraces and reproaches to human nature. Such people, all nations are intereſted, and ought to be reſenting, to ſuppreſs; conſidering that the particular ſtates themſelves, being the delinquents, can give no redreſs. And this I ſay is not to be meaſured ſo much by the principles of juriſts, as by *lex charitatis*, *lex proximi*, which includes the *Samaritan* as well as the *Levite*; *lex filiorum Adae de maſſa una:* upon which original laws this opinion is grounded: which to deny (if a man may ſpeak freely) were almoſt to be a ſchiſmatick in nature.

*The reſt was not perfected.*

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## *The Lord* Bacon's *queſtions about the lawfulneſs of a war for the propagating of religion.* Remains, *p.* 179.

### Queſtions wherein I deſire opinion, joined with arguments and authorities.

WHETHER a war be lawful againſt infidels, only for the propagation of the Chriſtian faith, without other cauſe of hoſtility?

WHETHER a war be lawful, to recover to the church countries, which formerly have been Chriſtian, though now alienate, and Chriſtians utterly extirpated?

WHETHER a war be lawful to free and deliver Chriſtians that yet remain in ſervitude, and ſubjection to infidels?

WHETHER a war be lawful in revenge, or vindication, of blaſphemy and reproaches againſt the Deity and our Saviour? Or for the ancient effuſion of Chriſtian blood, and cruelties upon Chriſtians?

WHETHER a war be lawful for the reſtoring and purging of the Holy Land, the ſepulchre, and other principal places of adoration and devotion?

WHETHER in the caſes aforeſaid, it be not obligatory to Chriſtian princes, to make ſuch a war, and not permiſſive only?

WHETHER the making of a war againſt the infidels, be not firſt in order of dignity, and to be preferr'd before extirpations of hereſies, reconcilements of ſchiſms, reformation of manners, purſuits of juſt temporal quarrels, and the like actions for the publick good; except there be either a more urgent neceſſity, or a more evident facility in thoſe inferior actions, or except they may both go on together in ſome degree?

*The End of the Third Volume.*

# APPENDIX.

## An ACCOUNT of the lately erected Service, called the Office of Compoſitions for Alienations.

Written [about the cloſe of 1598] by Mr. *Francis Bacon*, and now firſt publiſhed from a MS in the *Inner Temple* Library.

ALL the finances or revenues of the imperial crown of this realm of *England*, be either extraordinary or ordinary. The ſundry ſorts of the royal revenue.

THOSE extraordinary, be fifteenths and tenths, ſubſidies, loans, benevolences, aids, and ſuch others of that kind, that have been, or ſhall be invented for ſupportation of the charges of war; the which as it is entertained by diet, ſo can it not be long maintained by the ordinary fiſcal and receipt.

OF theſe that be ordinary, ſome are certain and ſtanding, as the yearly rents of the demeaſne or lands; being either of the ancient poſſeſſions of the crown, or of the later augmentations of the ſame.

LIKEWISE the fee farms reſerved upon charters granted to cities and towns corporate, and the blanch rents and lath ſilver anſwered by the ſheriffs. The reſidue of theſe ordinary finances be caſual, or uncertain, as be the eſcheats and forfeitures, the cuſtoms, butlerage and impoſt, the advantages coming by the juriſdiction of the courts of record and clerks of the market, the temporalities of vacant biſhopricks, the profits that grow by the tenures of lands, and ſuch like, if there any be.

AND albeit that both the one ſort and other of theſe, be at the laſt brought unto that office of her majeſty's exchequer, which we (by a metaphor) do call the pipe, as the civilians do by a like tranſlation name it *Fiſcus*, a baſket or bag, becauſe the whole receipt is finally conveyed into it by the means of divers ſmall pipes or quills, as it were water into a great head or ciſtern; yet nevertheleſs ſome of the ſame be firſt and immediately left in other ſeveral places and courts, from whence they are afterwards carried by ſilver ſtreams, to make up that great lake, or ſea, of money. The pipe.

As for example, the profits of wards and their lands, be anſwered into that court which is proper for them; and the fines for all original writs, and for cauſes that paſs the great ſeal, were wont to be immediately paid into the hanaper of the chancery: howbeit now of late years, all the ſums which are due, either for any writ of covenant, or of other ſort, (whereupon a final concord is to be levied in the common bench) or for any writ of entry (whereupon a common recovery is to be ſuffered there;) The hanaper.

as

as alſo all ſums demandable, either for licence of alienation to be made of lands holden in chief, or for the pardon of any ſuch alienation, already made without licence, together with the mean profits that be forfeited for that offence and treſpaſs, have been ſtayed in the way to the hanaper, and been let to farm, upon aſſurance of three hundred pound of yearly ſtanding profit, to be increaſed over and above that caſual commodity, that was found to be anſwered in the hanaper for them, in the ten years (one with another) next before the making of the ſame leaſe.

This office is derived out of the hanaper.

And yet ſo as that yearly rent of increaſe is now ſtill paid into the hanaper by four groſs portions, not altogether equal, in the four uſual open terms of St. *Michael*, and St. *Hilary*, of *Eaſter* and the *Holy Trinity*, even as the former caſualty it ſelf was wont to be (in parcel meal) brought in and anſwered there.

The name of the office.

And now foraſmuch as the only matter and ſubject about which this farmer, or his deputies, are employed, is to rate or compound the ſums of money payable to her majeſty, for the alienation of lands that are either made without licence, or to be made by licence, (if they be holden in chief,) or to paſs for common recovery, or by final concord to be levied, (though they be not ſo holden) their ſervice may therefore very aptly and agreeably be termed the office of compoſitions for alienations. Whether the advancement of her majeſty's commodity in this part of her prerogative, or the reſpect of private lucre, or both, were the firſt motives thus to diſſever this member, and thereby as it were to mayhem the chancery, it is neither my part nor purpoſe to diſpute.

The ſcope of this diſcourſe, and the parts thereof.

But for a full inſtitution of the ſervice as it now ſtandeth, howſoever ſome men have not ſpared to ſpeak hardly thereof, I hold worthy my labour to ſet down as followeth.

First, That theſe fines, exacted for ſuch alienations, be not only of the greateſt antiquity, but are alſo good and reaſonable in themſelves: ſecondly, that the modern and preſent exerciſe of this office, is more commendable than was the former uſage: and laſtly, that as her majeſty hath received great profit thereby, ſo may ſhe, by a moderate hand, from time to time reap the like, and that without juſt grief to any of her ſubjects.

The firſt part of this treatiſe.

As the lands that are to be aliened, be either immediately holden in chief, or not ſo holden of the queen: ſo be theſe fines or ſums reſpectively of two ſundry ſorts. For upon each alienation of lands, immediately held of her majeſty in chief, the fine is rated here, either upon the licence before the alienation is made, or elſe upon the pardon when it is made without licence. But generally for every final concord of lands to be levied upon a writ of covenant, *warrantia chartae*, or other writ, upon which it may be orderly levied, the ſum is rated here upon the original writ, whether the lands be held of the queen, or of any other perſon; if at the leaſt the lands be of ſuch value, as they may yield the due fine. And likewiſe for every writ of entry, whereupon a common recovery is to be ſuffered, the queen's fine is to be rated there upon the writ original, if the lands compriſed therein be held of her by the tenure of her prerogative, that is to ſay, in chief, or of her royal perſon.

The king's tenant in chief could never alien without licence. 1 E. III. *c.* 12.

So that I am hereby inforced, for avoiding of confuſion, to ſpeak ſeverally, firſt of the fines for alienation of lands held in chief, and then of the fines upon the ſuing forth of writs original. That the king's tenant in chief could not in ancient time alien his tenancy without the king's licence; it appeareth by the ſtatute (1 *E.* III. *cap.* 12.) where it is thus written;

written: " Whereas divers do complain, that the lands (holden of the king " in chief, and aliened without licence) have been ſeized into the king's " hands for ſuch alienation, and holden as forfeit: the king ſhall not " hold them as forfeit in ſuch a caſe, but granteth that (upon ſuch alie- " nations) there ſhall be reaſonable fines taken in the chancery by due " proceſs."

So that it is hereby proved, that before this ſtatute, the offence of ſuch alienation, without licence, was taken to be ſo great, that the tenant did forfeit the land thereby; and conſequently that he found great favour there by this ſtatute, to be reaſonably fined for his treſpaſs.

And although we read an opinion, 20 *lib. Aſſiſ. parl.* 17, *&* 26. *Aſſ. parl.* 37. which alſo is repeated by *Hankf.* 14 *H.* 4. *fol.* 3. in which year *Magna Charta* was confirmed by him, the king's tenant in chief might as freely alien his lands without licence, as might the tenant of any other lord: yet foraſmuch as it appeareth not by what ſtatute the law was then changed, I had rather believe (with old judge *Thorpe*, and late juſtice *Stanford)* that even at the common law, which is as much as to ſay, as from the beginning of our tenures, or from the beginning of the *Engliſh* monarchy, it was accounted an offence in the king's tenant in chief, to alien without the royal and expreſs licence.

And I am ſure, that not only upon the entring, or recording, of ſuch a fine for alienation, it is wont to be ſaid *pro tranſgreſſione in hac parte facta*; but that you may alſo read amongſt the records in the tower *(Fines* 6 *Hen. Reg.* 3. *Memb.* 4.) a precedent of a *capias in manum regis terras alienatas ſine licentia regis*, and that namely of the manour of *Coſeleſcombe* in *Kent*, whereof *Robert Ceſterton* was then the king's tenant in chief. But were it that, as they ſay, this began firſt 26 *Hen.* III. yet it is above three hundred and ſixty years old, and of equal if not more antiquity than *Magna Charta* it ſelf, and the reſt of our moſt ancient laws; the which never found aſſurance by parliament, until the time of King *Edw.* I. who may be therefore worthily called our *Engliſh Solon* or *Lycurgus.*

Now therefore to proceed to the reaſon and equity of exacting theſe fines for ſuch alienations, it ſtandeth thus: when the king (whom our law underſtandeth to have been at the firſt both the ſupreme lord of all the perſons, and ſole owner of all the lands within his dominions) did give lands to any ſubject to hold them of himſelf, as of his crown and royal diadem, he vouchſafed that favour upon a choſen and ſelected man, not minding that any other ſhould, (without his privity and good liking) be made owner of the ſame. And therefore his gift hath this ſecret intention incloſed within it, that if his tenant and patentee ſhall diſpoſe of the ſame without his kingly aſſent firſt obtained, the lands ſhall revert to the king, or to his ſucceſſors, that firſt gave them: and that alſo was the very cauſe, as I take it, why they were anciently ſeized into the king's hands as forfeit by ſuch alienation, until the making of the ſaid ſtatute (1 *Edw.* III.) which did qualify that rigour of the former law. The fine for alienation is moderate.

Neither ought this to ſeem ſtrange in the caſe of the king, when every common ſubject (being lord of lands which another holdeth of him) ought not only to have notice given unto him upon every alienation of his tenant, but ſhall (by the like implied intention) re-have the lands of his tenants, dying without heirs, though they were given out never ſo many years

years agone, and have paſſed through the hands of howſoever many and ſtrange poſſeſſors.

NOT without good warrant therefore, ſaid Mr. *Fitzherbert* in his *Nat. Brev. fol.* 147. That the juſtices ought not wittingly to ſuffer any fine to be levied of lands holden in chief, without the king's licence. And as this reaſon is good and forcible, ſo is the equity and moderation of the fine it ſelf moſt open and apparent; for how eaſy a thing is it to redeem a forfeiture of the whole lands for ever with the profits of one year, by the purchaſe of a pardon? Or otherwiſe, how tolerable is it to prevent the charge of that pardon, with the only coſt of a third part thereof, timely and beforehand beſtowed upon a licence?

The antiquity and moderation of fines upon writs original.

TOUCHING the king's fines accuſtomably paid for the purchaſing of writs original, I find no certain beginning of them, and do therefore think that they alſo grew up with the chancery, which is the ſhop wherein they be forged; or, if you will, with the firſt ordinary juriſdiction and delivery of juſtice it ſelf.

FOR when as the king had erected his courts of ordinary reſort, for the help of his ſubjects in ſuit one againſt another, and was at the charge not only to wage juſtice and their miniſters, but alſo to appoint places and officers for ſafe cuſtody of the records that concerned not himſelf; by which means each man might boldly both crave and have law for the preſent, and find memorials alſo to maintain his right and recovery, for ever after, to the ſingular benefit of himſelf and all his poſterity; it was conſonant to good reaſon, that the benefited ſubject ſhould render ſome ſmall portion of his gain, as well towards the maintenance of this his own ſo great commodity, as for the ſupportation of the king's expence, and the reward of the labour of them that were wholly employed for his profit.

Littl. 34 H. 6. *fol.* 38.

AND therefore it was well ſaid by *Littleton*, (34 *H.* 6. *fol.* 38.) That the chancellor of *England* is not bound to make writs, without his due fee for the writing and ſeal of them. And that, in this part alſo, you may have aſſurance of good antiquity, it is extant amongſt the records in the tower, 2 *H.* III. *Membr.* 6. that *Simon Hales* and others gave unto him their king, *unum palfredum pro ſummonendo* Richardo *filio & haerede* Willielmi *de* Hanred *quod teneat finem factum coram juſticiariis apud* Northampton, *inter dictum* Willielmum *& patrem dicti* Arnoldi *de feodo in* Barton. And beſides that *(in Oblatis de ann.* 1, 2, *&* 7. *regis* Johannis) fines were diverſly paid to the king upon the purchaſing writs of mort d'aunceſtor, dower, pone, to remove pleas for inquiſitions, trial by juries, writs of ſundry ſummons, and other more.

HEREOF then it is, that upon every writ procured for debt or damage, amounting to forty pounds or more, a noble, that is, ſix ſhillings and eight pence, is, and uſually hath been paid to fine. And ſo for every hundred marks more a noble; and likewiſe upon every writ called a *praecipe* of lands, exceeding the yearly value of forty ſhillings, a noble is given to a fine; and for every other five marks by year; moreover another noble, as it is ſet forth 20 *Rich.* II. (abridged both by juſtice *Fitzherbert*, and juſtice *Brooke*;) and may alſo appear in the old *Natura brevium*, and the regiſter, which have a proper writ of deceipt, formed upon the caſe, where a man did (in the name of another) purchaſe ſuch a writ in the chancery without his knowledge and conſent.

20 Rich. II.

AND

And herein the writ of right is excepted and paſſeth freely; not for fear of the words in *Magna Charta*, *Nulli vendemus juſtitiam vel rectum*, as ſome do phantaſy, but rather becauſe it is rarely brought; and then alſo bought dearly enough without ſuch a fine, for that the trial may be by battel to the great hazard of the champion.

The like exemption hath the writ to enquire of a man's death, which alſo, by the twenty-ſixth chapter of that *Magna Charta*, muſt be granted freely, and without giving any thing for it: which laſt I do rather note, becauſe it may be well gathered thereby, that even then all thoſe other writs did lawfully anſwer their due fines: for otherwiſe the like prohibition would have been publiſhed againſt them, as was in this caſe of the inquiſition it ſelf.

I see no need to maintain the mediocrity and eaſineſs of this laſt ſort of fine, which in lands exceedeth not the tenth part of one year's value, and in goods the two hundredth part of the thing that is demanded by the writ.

Neither hath this office of ours * originally to meddle with the fines of any other original writs, than of ſuch only as whereupon a fine or concord may be had and levied; which is commonly the writ of covenant, and rarely any other. For we deal not with the fine of the writ of entry of lands holden in chief, as due upon the original writ it ſelf; but only as payable in the nature of a licence for the alienation, for which the third part of the yearly rent is anſwered; as the ſtatute 32 *H.* VIII. *cap.* 1. hath ſpecified, giving the direction for it; albeit now lately the writs of entry be made parcel of the parcel ferm alſo; and therefore I will here cloſe up the firſt part, and unfold the ſecond.

* *Right*, or ſome word of the like import ſeems to be omitted here.

Before the inſtitution of this ferm and office, no writ of covenant for the levying any final concord, no writ of entry for the ſuffering of any common recovery of lands holden in chief, no doquet for licence to alien, nor warrant for pardon of alienation made, could be purchaſed and gotten without an oath called an affidavit, therein firſt taken either before ſome juſtice of aſſize, or maſter of the chancery, for the true diſcovery of the yearly value of the lands compriſed in every of the ſame: in which doing, if a man ſhall conſider on the one ſide the care and ſeverity of the law, that would not be ſatisfied without an oath; and on the other ſide the aſſurance of the truth to be had by ſo religious an affirmation as an oath is, he will eaſily believe that nothing could be added unto that order, either for the ready diſpatch of the ſubject, or for the uttermoſt advancement of the king's profit. But *quid verba audiam, cum facta videam?* Much peril to the ſwearer, and little good to our ſovereign hath enſued thereof. For on the one ſide the juſtices of aſſize were many times abuſed by their clerks, that preferred the recognitions of final concords taken in their circuit; and the maſters of the chancery were often overtaken by the fraud of ſolicitors and attorneys, that followed their clients cauſes here at *Weſtminſter*; and on the other ſide light and lewd perſons, eſpecially, that the exactor of the oath did neither uſe exhortation, nor examining of them for taking thereof, were as eaſily ſuborned to make an affidavit for money, as poſt-horſes and hackneys are taken to hire in *Canterbury* and *Dover* way: inſomuch that it was uſual for him that dwelt in *Southwark*, *Shoreditch*, or *Tothil-ſtreet*, to depoſe the yearly rent or valuation of lands lying in the north, the weſt, or other remote part of the realm, where either he never

The ſecond part of this treatiſe.

All fines upon oath.

was at all, or whence he came ſo young, that little could he tell what the matter meaned: And thus *conſuetudinem peccandi fecit multitudo peccantium.* For the removing of which corruption, and of ſome others whereof I have long ſince particularly heard, it was thought good that the juſtice of aſſize ſhould be entreated to have a more vigilant eye upon their clerks writing; and that one ſpecial maſter of the chancery ſhould be appointed to reſide in this office, and to take the oaths concerning the matters that come hither; who might not only reject ſuch as for juſt cauſes were unmeet to be ſworn, but might alſo inſtruct and admoniſh in the weight of an oath, thoſe others that are fit to paſs and perform it: and foraſmuch as thereby it muſt needs fall out very often, that either there was no man ready and at hand that could with knowledge and good conſcience undertake the oath, or elſe that ſuch honeſt perſons as were preſent, and did right well know the yearly value of the lands, would rather chuſe and agree to pay a reaſonable fine without any oath, than to adventure the uttermoſt, which, by the taking of their oath, muſt come to light and diſcovery: It was alſo provided, that the fermour, and the deputies, ſhould have power to treat, compound and agree with ſuch, and ſo not exact any oath at all of them.

How much this ſort of finance hath been increaſed by this new device, I will reſerve (as I have already plotted it) for the laſt part of this diſcourſe: but in the mean while I am to note firſt, that the fear of common perjury, growing by a daily and over-uſual acquaintance with an oath, by little and little razeth out that moſt reverend and religious opinion thereof, which ought to be planted in our hearts, is hereby for a great part cut off and clean removed: then that the ſubject yieldeth little or nothing more now than he did before, conſidering that the money which was wont to be ſaved by the former corrupt ſwearing, was not ſaved unto him, but loſt to her majeſty and him, and found only in the purſe of the clerk, attorney, ſolicitor, or other follower of the ſuit: and laſtly, that the client, beſides the benefit of retaining a good conſcience in the paſſage of this his buſineſs, hath alſo this good aſſurance, that he is always a gainer, and by no means can be at any loſs, as ſeeing well enough, that if the compoſition be over-hard and heavy for him, he may then, at his pleaſure, relieve himſelf by recourſe to his oath; which alſo is no more than the ancient law and cuſtom of the realm hath required at his hands. And the ſelf-ſame thing is moreover (that I may ſhortly deliver it by the way) not only a ſingular comfort to the executioners of this office, a pleaſant ſeaſoning of all the ſowr of their labour and pains, when they ſhall conſider that they cannot be guilty of the doing of any oppreſſion or wrong; but it is alſo a moſt neceſſary inſtruction and document for them, that even as her majeſty hath made them diſpenſators of this her royal favour towards her people, ſo it behoveth them to ſhew themſelves *peregrinatores*, even and equal diſtributers of the ſame; and (as that moſt honourable lord and reverend ſage counſellor, the *late lord *Burleigh*, late lord treaſurer, ſaid to my ſelf) to deal it out with wiſdom and good dexterity towards all the ſorts of her loving ſubjects.

* This paſſage aſcertains the date of this writing.

The part of each officer.

But now that it may yet more particularly appear what is the ſum of this new building, and by what joints and ſinews the ſame is raiſed and knit together, I muſt let you know, that beſides the fermours deputies (which at this day be three in number,) and beſides the doctor of whom

I ſpake, there is alſo a receiver, who alone handleth the moneys, and three clerks, that be employed ſeverally, as anon you ſhall perceive; and by theſe perſons the whole proceeding in this charge is thus performed.

Proceeding upon fines.

If the recognition or acknowledgment of a final concord upon any writ of covenant finally, for ſo we call that which containeth lands above the yearly value of forty ſhillings, and all others we term unfinable, be taken by juſtice of aſſize, or by the chief juſtice of the common plea, and the yearly value of thoſe lands be alſo declared by affidavit made before the ſame juſtice; then is the recognition and value, ſigned with the hand-writing of that juſtice, carried by the curſitor in chancery for that ſhire where thoſe lands do lie, and by him is a writ of covenant thereupon drawn and ingroſſed in parchment; which (having the ſame value indorſed on the backſide thereof) is brought, together with the ſaid paper that doth warrant it, into this office: and there firſt the doctor, conferring together the paper and writ, indorſeth his name upon that writ, cloſe underneath the value thereof: then foraſmuch as the valuation thereof is already made, that writ is delivered to the receiver, who taketh the ſum of money that is due, after the rate of that yearly value, and indorſeth the payment thereof upon the ſame writ accordingly: this done, the ſame writ is brought to the ſecond clerk, who entereth it into a ſeveral book, kept only for final writs of covenant, together with the yearly value, and the rate of the money paid, with the name of the party that made the affidavit, and of the juſtice that took it; and at the foot of that writ maketh a ſecret mark of his ſaid entry: laſtly, that writ is delivered to the deputies, who ſeeing that all the premiſſes be orderly performed, do alſo indorſe their own names upon the ſame writ for teſtimony of the money received. Thus paſſeth it from this office to the *cuſtos brevium*, from him to the queen's ſilver, then to the chirographer to be engroſſed, and ſo to be proclaimed in the court. But if no affidavit be already made touching the value, then is the writ of covenant brought firſt to the deputies ready drawn and ingroſſed: and then is the value made either by compoſition, had with them without any oath, or elſe by oath taken before the doctor; if by compulſion, then one of the deputies ſetteth down the yearly value (ſo agreed upon) at the foot of the backſide of the writ: which value the doctor cauſeth one of the clerks to write on the top of the backſide of the writ, (as the curſitor did in the former;) and after that the doctor indorſeth his own name underneath it, and ſo paſſeth it through the hands of the receiver of the clerk that maketh the entry, and of the deputies as the former writ did. But if the valuation be made by oath taken before the doctor, then cauſeth he the clerk to indorſe that value accordingly, and then alſo ſubſcribeth he his name as before; and ſo the writ taketh the ſame courſe through the office that the others had.

Proceeding upon writs of entry.

And this is the order for writs of covenant that be finable; the like whereof was at the firſt obſerved, in the paſſing of writs of entry of lands holden in chief: ſaving that they be entered into another book, eſpecially appointed for them and for licences and pardons of alienations; and the like is now ſeverally done with the writs of entry of lands not ſo holden: which writs of covenant or entry not finable, thus it is done: an affidavit is made either before ſome ſuch juſtice, or before the ſaid doctor, that the lands, compriſed in the writ, be not worth above forty ſhillings by the year, to be taken. And albeit now here can be no compoſition, ſince the queen is to have no fine at all for unfinable writs, yet doth the doctor indorſe his

name, and cauſe the youngeſt, or third clerk, both to make entry of the writ into a third book, purpoſely kept for thoſe only writs, and alſo to indorſe it thus, *finis nullus:* That done, it receiveth the names of the deputies, indorſed as before, and ſo paſſeth hence to the *cuſtos brevium* as the reſt. Upon every doquet for licence of alienation, or warrant for pardon of alienation, the party is likewiſe at liberty either to compound with the deputies, or to make affidavit touching the yearly value; which being known once and ſet down, the doctor ſubſcribeth his name, the receiver taketh the money after the due rate and proportion; the ſecond clerk entereth the doquet or warrant into the book that is proper for them, and for the writs of entry, with a notice alſo, whether it paſſeth by oath or by compoſition: then do the deputies ſign it with their hands, and ſo it is conveyed to the deputy of Mr. *Bacon*, clerk of the licences, whoſe charge it is to procure the hand of the lord chancellor, and conſequently the great ſeal for every ſuch licence or pardon.

Proceeding upon forfeiture of mean profits.

THERE it remaineth untouched, the order that is for the mean profits; for which alſo there is an agreement made here when it is diſcovered, that any alienation hath been made of lands holden in chief, without the queen's licence; and albeit that in the other caſes, one whole year's profit be commonly payable upon ſuch a pardon, yet where the alienation is made by deviſe in a laſt will only, the third part of theſe profits is there demandable, by ſpecial proviſion thereof made in the ſtatute 34 *H.* VIII. *c.* 5. but yet every way the yearly profits of the lands ſo aliened without licence, and loſt even from the time of the writ of *ſcire facias*, or inquiſition thereupon returned into the exchequer, until the time that the party ſhall come hither to ſue forth his charter of pardon for that offence.

34 H. VIII. *c.* 5.

IN which part the ſubject hath in time gained double eaſe of two weighty burdens, that in former ages did grievouſly preſs him: the one before the inſtitution of this office, and the other ſithence; for in ancient time, and of right, (as it is adjudged 46 *E.* III. *Fitzh. forfait* 18.) the mean profits were preciſely anſwered after the rate and proportion *per diem*, even from the time of the alienation made. Again, whereas before the receipt of them in this office, they were aſſeſſed by the affidavit from the time of the inquiſition found, or *ſcire facias* returned, now not ſo much at any time as the one half, and many times not the ſixth part of them is exacted. Here therefore, above the reſt, is great neceſſity to ſhew favour and merciful dealing: becauſe it many times happeneth, that either through the remote dwelling of the party from the lands, or by the negligence or evil practice of under-ſheriffs and their bailiffs, the owner hath incurred the forfeiture of eight or ten years whole profits of his lands, before he cometh to the knowledge of the proceſs that runneth againſt him: other times an alienation made without licence is diſcovered, when the preſent owner of the lands is altogether ignorant, that his lands be holden in chief at all: other times alſo ſome man concludeth himſelf to have ſuch a tenure by his own ſuing forth of a ſpecial writ of livery, or by cauſleſs procuring a licence, or pardon, for his alienation, when in truth the lands be not either holden at all of her majeſty, or not holden in chief, but by a mean tenure in ſocage, or by knight's ſervice at the moſt. In which caſes, and the like, if the extremity ſhould be rigourouſly urged and taken, eſpecially where the years be many, the party ſhould be driven to his utter overthrow, to make half a purchaſe, or more, of his own proper land and living.

ABOUT

About the diſcovery of the tenure in chief, following of proceſs for ſuch alienation made, as alſo about the calling upon ſheriffs for their accounts, and the bringing in of the parties by ſeizure of their lands: therefore the firſt and principal clerk in this office, of whom I had not before any cauſe to ſpeak, is chiefly and in a manner wholly occupied and ſet on work. Now if it do at any time happen (as notwithſtanding the beſt endeavour it may and doth happen) that the proceſs, howſoever colourably awarded, hath not hit the very mark whereat it was directed, but happily calleth upon ſome man who is not of right to be charged with the tenure in chief, that is objected againſt; then is he, upon oath and other good evidence, to receive his diſcharge under the hands of the deputies, but with a *quouſque*, and with *ſalvo jure dominae*. Uſage and deceivable manner of awarding proceſs cannot be avoided, eſpecially where a man (having in ſome one place both lands holden in chief, and other lands not ſo holden) alieneth the lands not holden: ſeeing that it cannot appear by record nor otherwiſe, without the expreſs declaration and evidences of the party himſelf, whether they be the ſame lands that be holden or others. And therefore albeit the party grieved thereby, may have ſome reaſon to complain of an untrue charge, yet may he not well call it an unjuſt vexation; but ought rather to look upon that eaſe, which in this kind of proceeding he hath found, where, beſides his labour, he is not to expend above two and twenty ſhillings in the whole charge, in compariſon of that toil, coſt and care, which he in the caſe was wont to ſuſtain by the writ of *certiorari* in the exchequer; wherein, beſides all his labour, it did coſt him fifty ſhillings at the leaſt, and ſometimes twice ſo much, before he could find the means to be delivered.

The chief clerk.

The diſcharge of him that holdeth not in chief when he is ſued erroneouſly.

Thus have I run through the whole order of this practice, in the open time of the term; and that the more particularly and at full, to the end that thereby theſe things enſuing, might the more fully appear, and plainly bewray themſelves: firſt, that this preſent manner of exerciſing of this office, hath ſo many teſtimonies, interchangeable warrants, and counterrolments, whereof each, running through the hands and reſting in the power of ſo many ſeveral perſons, is ſufficient to argue and convince all manner of falſhood; ſo as with a general conſpiracy of all thoſe officers together, it is almoſt impoſſible to contrive any deceit therein: a right, ancient and ſound policy, whereupon both the order of the accounts in the exchequer, and of the affairs of her majeſty's own houſhold are ſo grounded and built, that the infection of an evil mind in ſome one or twain, cannot do any great harm, unleſs the reſt of the company be alſo poiſoned by their contagion. And ſurely, as *Cicero* ſaid, *Nullum eſt tam deſperatum collegium, in quo non unus e multis ſit ſana mente praeditus.* Secondly, that here is great uſe both of diſcretion, learning and integrity: of diſcretion, I ſay, for examining the degrees of favour, which ought to be imparted diverſly, and for diſcerning the valuations of lands, not in one place or ſhire, but in each county and corner of the realm; and that not of one ſort or quality, but of every kind, nature and degree: for a taſte whereof, and to the end that all due quality of rates be not ſuddenly charged with infidelity, and condemned for corruption; it is note worthy, that favour is here ſometimes right worthily beſtowed, not only in a general regard of the perſon, by which every man ought to have a good pennyworth of his own, but more eſpecially alſo and with much diſtinction: for a peer of the realm, a counſellour of ſtate, a judge of the land, an officer that laboureth

Policy for avoiding corruption.

Inequality of rates juſtifiable.

The perſon.

boureth in furtherance of the tenure, or a poor perſon are not, as I think, to be meaſured by the common yard, but by the pole of ſpecial grace and diſpenſation: ſuch as ſerved in the wars, have been permitted, by many ſtatutes, to alien their lands of this tenure, without ſuing out of any licence. All thoſe of the chancery have claimed and taken the privilege to paſs their writs without fine; and yet therefore do ſtill look to be eaſily fined: yea, the favourites in court, and as many as ſerve the queen in ordinary, take it unkindly if they have not more than market meaſure.

The place.

AGAIN, the conſideration of the place or county where the lands do lie, may juſtly cauſe the rate or valuation to be the more or leſs: for as the writs do commonly report the land by numbers of acres, and as it is allowable, for the eſchewing of ſome dangers, that thoſe numbers do exceed the very content and true quantity of the lands themſelves; ſo in ſome counties they are not much acquainted with admeaſurement by acre: and thereby, for the moſt part, the writs of thoſe ſhires and counties do contain twice or thrice ſo many acres more than the land hath. In ſome places the lands do lie open in common fields, and be not ſo valuable as if they were incloſed: And not only in one and the ſame ſhire, but alſo within the ſelf-ſame lordſhip, pariſh or hamlet, lands have their divers degrees of value, through the diverſity of their fertility or barrenneſs: wherein how great odds and variety there is, he ſhall ſooneſt find, that will examine it by his own ſkill in whatſoever place that he knoweth beſt.

MOREOVER, ſome lands be more changeable than others are, reſpecting either the tenure, as knights ſervice, and the tenure in chief, or in regard of defence againſt the ſea and great rivers; as for their lying near to the borders of the realm, or becauſe of great and continual purveyances that are made upon them, or ſuch like.

AND in ſome counties, as namely weſtward, their yearly rents, by which moſt commonly their value to her majeſty is accounted, are not to this day improved at all, the landlords making no leſs gain by fines and incomes, than there is raiſed in other places by inhancement of rents.

The manner of the aſſurance.

THE manner and ſorts of the conveyance of the land it ſelf, is likewiſe variable, and therefore deſerveth a divers conſideration and value: for in a pardon one whole year's value, together with the mean rates thereof, is due to be paid; which ought therefore to be more favourably aſſeſſed, than where but a third part of one year's rent, as in a licence or writ of entry, or where only a tenth part, as in a writ of covenant, is to be demanded.

A licence alſo and a pardon are to paſs the charges of the great ſeal, to the which the bargain and ſale, the fine and recovery are not ſubject. Sometimes upon one only alienation and change, the purchaſer is to paſs both licence, fine and recovery, and is for this multiplicity of payments more to be favoured, than he which bringeth but one ſingle pay for all his aſſurance.

MOREOVER, it is very often ſeen that the ſame land ſuffereth ſundry tranſmutations of owners within one term, or other ſmall compaſs of time; by which return much profit cometh to her majeſty, though the party feel of ſome favour in that doing.

The end of conveyances.

NEITHER is it of ſmall moment in this part, to behold to what end the conveyances of land be delivered: ſeeing that ſometimes it is only to eſtabliſh the lands in the hands of the owner and his poſterity, without any alienation and change of poſſeſſion to be made: ſometimes a fine is levied

levied only to make good a leaſe for years, or to paſs an eſtate for life, upon which no yearly rent is reſerved; or to grant a reverſion, or remainder, expectant upon a leaſe, or eſtate, that yieldeth no rent. Sometime the land is given in mortgage only, with full intention to be redeemed within one year, ſix months, or a leſſer time. Many aſſurances do alſo paſs to godly and charitable uſes alone; and it happeneth not ſeldom, that, to avoid the yearly oath, for averment of the continuance of ſome eſtate for life, which is eigne, and not ſubject to forfeiture for the alienation that cometh after it, the party will offer to ſue a pardon uncompelled before the time; in all which ſome mitigation of the uttermoſt value may well and worthily be offered, the rather for that the ſtatute (1 *E.* III. *cap.* 12.) willeth, that in this ſervice generally, a reaſonable fine ſhall be taken. 1 E. III. c. 12.

Error and miſtaking.

LASTLY, error, miſclaim and forgetfulneſs, do now and then become ſuitors for ſome remiſſion of extream rigour: for I have ſundry times obſerved, that an aſſurance, being paſſed through for a competent fine, hath come back again by reaſon of ſome overſight, and the party hath voluntarily repaſſed it within a while after. Sometime the attorney, or follower of the cauſe, unſkilfully thruſteth into the writ, both the uttermoſt quantity, or more, of the land, and the full rent alſo that is given for it: or elſe ſetteth down an entierty, where but a moiety, a third or fourth part only was to be paſſed, or cauſeth a bargain and ſale to be enrolled, when nothing paſſed thereby; becauſe a fine had transferred the land before: or elſe enrolleth it within the ſix months; whereas, before the end of thoſe months, the land was brought home to the firſt owner, by repayment of the money for which it was engaged. In which and many other like caſes, the client will rather chuſe to give a moderate fine for the alienation ſo recharged, than to undertake a coſtly plea in the exchequer, for reformation of that which was done amiſs. I take it for a venial fault alſo to vouchſafe a pardon, after the rate and proportion of a licence, to him that without fraud or evil mind, hath ſlipped a term or two months, by forgetting to purchaſe his licence.

MUCH more could I ſay concerning this unblameable inequality of fines and rates; but as I meant only to give an eſſay thereof, ſo not doubting but that this may ſtand, both for the ſatisfaction of ſuch as be indifferent, and for the diſcharge of us that be put in truſt with the ſervice, wherein no doubt a good diſcretion and dexterity ought to be uſed, I reſort to the place where I left, affirming that there is in this employment of ours great uſe of good learning alſo, as well to diſtinguiſh the manifold ſorts of tenures and eſtates; to make conſtruction of grants, conveyances and wills, and to ſound the validity of inquiſitions, liveries, licences and pardons: as alſo to decipher the manifold ſlights and ſubtilties that are daily offered to defraud her majeſty in this her moſt ancient and due prerogative, and finally to handle many other matters, which this purpoſe will not permit me to recount at large.

LASTLY, here is need, as I ſaid, of integrity throughout the whole labour and practice, as without the which both the former learning and diſcretion are no better than *armata nequitia*, and nothing elſe but deteſtable craft and double villany.

AND now as you have ſeen that theſe clerks want not their full taſk of labour during the time of the open term, ſo is there for them whereupon to be occupied in the vacation alſo.

FOR

For whereas alienations of lands, holden by the tenure of prerogative, be continually made, and that by many and divers ways, whereof all are not, at the firſt, to be found of record; and yet for the moſt part do come to be recorded in the end: the clerks of this office do in the time of the vacation, repair to the rolls and records, as well of the chancery and king's bench, as of the common pleas and exchequer, whence they extract notes not only of inquiſitions, common recoveries, and indentures of bargains and ſales, that cannot but be of record, but alſo of ſuch feoffments, exchanges, gifts by will, and indentures of covenants to raiſe uſes of lands holden in chief, as are firſt made in the country without matter of record, and come at the length to be found by office, or inquiſition, that is of record; all which are digeſted into apt books, and are then ſent to the remembrancer of the lord treaſurer in the exchequer, to the end that he may make and ſend out proceſſes upon them, as he doth upon the extracts of the final concords of ſuch lands, which the clerk of the fines doth convey unto him.

Thus it is plain, that this new order by many degrees excelleth the former uſage; as alſo for the preſent advancement of her majeſty's commodity, and for the future profit which muſt enſue, by ſuch diſcovery of tenures as were concealed before, by awaking of ſuch as had taken a long ſleep, and by reviving a great many that were more than half dead.

The fees, or allowances, that are termly given to theſe deputies, receiver, and clerks, for recompence of theſe their pains, I do purpoſely pretermit; becauſe they be not certain, but arbitrary, at the good pleaſure of thoſe honourable perſons that have the diſpenſation of the ſame: howbeit hitherto each deputy and the receiver hath received twenty pounds for his travail in each term, only the doctor hath not allowance of any ſum in groſs, but is altogether paid in petty fees, by the party or ſuitor; and the clerks are partly rewarded by that mean alſo, for their entries, diſcharges, and ſome other writings, beſides that termly fee which they are allowed.

Note. But if the deputies take one penny, beſides their known allowance, they buy it at the deareſt price that may be; I mean the ſhipwreck of conſcience, and with the irrecoverable loſs of their honeſty and credit; and therefore ſince it appeareth which way each of theſe hath his reward, let us alſo examine that increaſe of benefit and gain, which is brought to her majeſty by the invention of this office.

At the end of *Hilary* term 1589, being the laſt open term of the leaſe of theſe profits granted to the late earl of *Leiceſter*, which alſo was to expire at the feaſt of the annunciation of the bleſſed virgin *Mary* 1590, then ſhortly to enſue; the officers above remembred thought it, for good cauſes, their duties to exhibit to the ſaid right honourable the lord treaſurer, a ſpecial declaration of the yearly profits of theſe finances, paid into the hanaper during every of the ſix years before the beginning of the demiſe thereof made to that earl, conferred with the profits thereof that had been yearly taken, during the ſix laſt years before the determination of the leaſe. By which it plainly appeared, that in all thoſe firſt ſix years, next before the demiſe, there had been raiſed only 12798 *l.* 15 *s.* 7 *d. ob.* and in theſe laſt ſix years of the demiſe the full ſum of 32160 *l.* 4 *s.* 10 *d. qu.* and ſo in all 19362 *l.* 2 *s.* 2 *d. ob. qu.* more in theſe laſt, than in thoſe former ſix years. But becauſe it may be ſaid, that all this increaſe redounded to the gain of the fermor only, I muſt add, that during all the time of the demiſe, he anſwered 300 *l.* rent, of yearly increaſe, above all that profit

of 2133 *l.* 2 *s.* 7 *d. qu.* which had been yearly and caſually made in the ſixteen years one with another next before: the which, in the time of fourteen years, for ſo long theſe profits have been demiſed by three ſeveral leaſes, did bring 4200 *l.* to her majeſty's coffers. I ſay yearly; which may ſeem ſtrange, that a caſual and thereby uncertain profit ſhould yearly be all one: but indeed ſuch was the wondrous handling thereof, that the profit was yearly neither more nor leſs to her majeſty, howſoever it might caſually be more or leſs to him that did receive it. For the writs of covenant anſwered year by year 1152 *l.* 16 *s.* 8 *d.* the licences and pardons 934 *l.* 3 *s.* 11 *d. qu.* and the mean rates 46 *l.* 2 *s.* in all 2133 *l.* 2 *s.* 7 *d. qu.* without increaſe or diminution.

Moreover, whereas her majeſty did, after the death of the earl, buy of the counteſs, being his executrix, the remanent of the laſt term of three years in thoſe profits, whereof there were only then ſix terms, that is, about one year and an half, to come, paying for it the ſum of 3000 *l.* her majeſty did clearly gain by that bargain the full ſum of 1173 *l.* 15 *s.* 8 *d. ob.* above the ſaid 3000 *l.* above the rent of 3649 *l.* 13 *s.* 10 *d. ob. qu.* proportionably due for that time, and above all fees and other repriſes. Neither hath the benefit of this increaſe to her majeſty, been contained within the bounds of this ſmall office, but hath ſwelled over the banks thereof, and diſplayed it ſelf apparently, as well in the hanaper by the fees of the great ſeal, which yielding 20 *s.* 4 *d.* towards her majeſty for every licence and pardon, was eſtimated to advantage her highneſs during thoſe fourteen years, the ſum of 3721 *l.* 6 *s. ob. qu.* more than without that demiſe ſhe was like to have found. As alſo in the court of wards and liveries, and in the exchequer it ſelf: where, by reaſon of the tenures in chief revived through the only labours of theſe officers, both the ſums for reſpect of homage be increaſed, and the profits of wardſhips, primer ſeiſins, ouſter le maine, and liveries, cannot but be much advanced. And ſo her majeſty's ſelf hath, in this particular, gained the full ſum of 8736 *l.* 5 *s.* 5 *d. ob. qu.* not compriſing thoſe profits in the exchequer and court of wards, the very certainty whereof lieth not in the knowledge of theſe officers, nor accounting any part of that great benefit which the earl and his executrix have made by the demiſes; the which, one year with another, during all the thirteen years and a half, I ſuppoſe to have been 2263 *l.* or thereabouts; and ſo in all about 27158 *l.* above all his coſts and expences. The which albeit I do here report only for the juſtification of the ſervice in this place; yet who cannot but ſee withal, how much the royal revenues might be advanced, if but the like good endeavours were ſhewed for her majeſty in the reſt of her finances, as have been found in this office for the commodity of this one ſubject.

The views of all which matter being preſented to the moſt wiſe and princely conſideration of her majeſty, ſhe was pleaſed to demiſe theſe profits and fines for other five years, to begin at the feaſt of the annunciation 1590, in the thirty ſecond year of her reign, for the yearly rent formerly reſerved upon the leaſes of the earl; within the compaſs of which five years expired at the annunciation 1595, there was advanced to her majeſty's benefit by this ſervice, the whole ſum of 13013 *l.* 14 *s.* 1 *d. qu.* beyond the ancient yearly revenues, which before any leaſe, were uſually made of theſe finances. To which, if there be added 5700 *l.* for the gain given to her majeſty by the yearly receipt of 300 *l.* in rent, from the firſt demiſe to the earl, until the time of his death, together with the ſum

of 1173 *l.* 15 *s.* 8 *d. ob.* clearly won in thoſe ſix terms bought of the counteſs: then the whole commodity, from the firſt inſtitution of this office, till the end of theſe laſt five years, expired at the annunciation 1595, ſhall appear to be 19887 *l.* 9 *s.* 9 *d. ob. qu.* To the which ſum alſo, if 28550 *l.* 15 *s.* 6 *d. ob. qu.* which the earl and the counteſs levied hereby, be likewiſe adjoined, then the whole profit taken in theſe nineteen years, that is, from the firſt leaſe, to the end of the laſt, for her majeſty, the earl and the counteſs, will amount unto 48438 *l.* 5 *s.* 4 *d.* This labour hitherto thus luckily ſucceeding, the deputies in this office finding by daily proof, that it was weariſome to the ſubject to travel to divers places, and through ſundry hands, for the purſuing of common recoveries, either not holden of her majeſty at all, or but partly holden in chief; and not doubting to improve her majeſty's revenue therein, and that without loſs to any, either private perſon or publick officer; if the ſame might be managed by them jointly with the reſt whereof they had the charge, they found by ſearch in the hanaper, that the fruits of thoſe writs of entry had not, one year with another, in the ten years next before, exceeded 400 *l.* by the year. Whereupon they took hold of the occaſion then preſent, for the renewing of the leaſe of the former profits; and moved the lord treaſurer, and ſir *John Forteſcue*, under-treaſurer and chancellor of the exchequer, to join the ſame in one and the ſame demiſe, and to yield unto her majeſty 500 *l.* by year therefore; which is 100 *l.* yearly of increaſe. The which deſire being by them recommended to her majeſty, it liked her forthwith to include the ſame, and all the former demiſed profits, within one entire leaſe, for ſeven years, to begin at the ſaid feaſt of the annunciation 1597, under the yearly rent of 2933 *l.* 2 *s.* 7 *d. qu.* Since which time hitherto, I mean to the end of *Michaelmas* term 1598, not only the proportion of the ſaid increaſed 100 *l.* but almoſt of one other 100 *l.* alſo, hath been anſwered to her majeſty's coffers, for thoſe recoveries ſo drawn into the demiſe now continuing.

THUS I have opened both the firſt plotting, the eſpecial practice, and the conſequent profit ariſing by theſe officers: and now if I ſhould be demanded, whether this increaſe of profit were likely to ſtand without fall, or to be yet amended or made more? I would anſwer, that if ſome few things were provided, and ſome others prevented, it is probable enough in mine opinion, that the profit ſhould rather receive acceſſion than decay.

THE things that I wiſh to be provided are theſe, firſt, that by the diligence of theſe officers, aſſiſted with ſuch other as can bring good help thereunto, a general and careful collection be made of all the tenures in chief; and that the ſame be digeſted by way of alphabet into apt volumes, for every part, or ſhire, of the realm. Then that every office, or inquiſition, that findeth any tenure in chief, ſhall expreſs the true quantities of the lands ſo holden, even as in ancient time it was wont to be done by way of admeaſurement, after the manner of a perfect extent or ſurvey: Whereby all the parts of the tenancy in chief may be wholly brought to light, howſoever in proceſs of time it hath been, or ſhall be torn and diſmembred. For prevention, I wiſh likewiſe, firſt, that ſome good means were deviſed for the reſtraint of making theſe inordinate and covenous leaſes of lands, holden in chief, for hundreds or thouſands of years, now grown ſo bold, that they dare ſhew themſelves in fines, levied upon the open ſtage of the common pleas, by which one man taketh the full profit, and another

ther beareth the empty name of tenancy, to the infinite deceipt of her majeſty, in this part of her prerogative. Then that no alienation of lands, holden in chief, ſhould be available, touching the freehold or inheritance thereof, but only where it were made by matter of record, to be found in ſome of her majeſty's treaſuries: and laſtly, that a continual and watchful eye be had, as well upon theſe new founden traverſes of tenure, which are not now tried, *per patriam*, as the old manner was, as alſo upon all ſuch pleas whereunto the confeſſion of her majeſty's ſaid attorney general is expected: ſo as the tenure of the prerogative be not prejudiced, either by the fraud of counſellors at the law, many of which do bend their wits to the overthrow thereof; or by the greedineſs of clerks and attorneys, that, to ſerve their own gain, do both impair the tenure, and therewithal grow more heavy to the client, in ſo coſtly pleading for diſcharge, than the very confeſſion of the matter it ſelf would prove unto him. I may yet hereunto add another thing, very meet not only to be prevented with all ſpeed, but alſo to be puniſhed with great ſeverity: I mean that colluſion ſet on foot lately, between ſome of her majeſty's tenants in chief, and certain other that have had to do in her highneſs grants of concealed lands: where under a feign'd concealment of the land it ſelf, nothing elſe is ſought but only to make a change of the tenure, which is reſerved upon the grant of thoſe concealments, into that tenure in chief: in which practice there is no leſs abuſe of her majeſty's great bounty, than loſs and hinderance of her royal right. Theſe things thus ſettled, the tenure in chief ſhould be kept alive and nouriſhed; the which, as it is the very root that doth maintain this ſilver ſtem, that by many rich and fruitful branches ſpreadeth it ſelf into the chancery, exchequer, and court of wards: ſo if it be ſuffered to ſtarve, by want of ablaqueation, and other good huſbandry, not only this yearly fruit will much decreaſe from time to time, but alſo the whole body and boughs of that precious tree it ſelf, will fall into danger of decay and dying.

And now, to conclude therewith, I cannot ſee how it may juſtly be miſliked, that her majeſty ſhould, in a reaſonable and moderate manner, demand and take this ſort of finance: which is not newly out and impoſed, but is given and grown up with the firſt law it ſelf, and which is evermore accompanied with ſome ſpecial benefit to the giver of the ſame: ſeeing that lightly no alienation is made, but either upon recompence in money, or land, or for marriage, or other good and profitable conſideration that doth move it: yea rather all good ſubjects and citizens ought not only to yield that gladly of themſelves, but alſo to further it with other men; as knowing that the better this and ſuch like ancient and ſettled revenues ſhall be anſwered and paid, the leſs need her majeſty ſhall have, to aſk ſubſidies, fifteens, loans, and whatſoever extraordinary helps, that otherwiſe muſt of neceſſity be levied upon them. And for proof that it ſhall be more profitable to her majeſty to have every of the ſame to be managed by men of fidelity, that ſhall be waged by her own pay, than either to be letten out to the fermours benefits, or to be left at large to the booty and ſpoil of ravenous miniſters, that have not their reward: let the experiment and ſucceſs be in this one office, and perſuade for all the reſt.

*Laus Deo.*

# ADVICE

TO

# Sir *GEORGE VILLIERS*,

AFTERWARDS

## DUKE of BUCKINGHAM,

When he became

## Favourite to King *James*;

Recommending many important inſtructions how to govern himſelf in the ſtation of prime miniſter: written by Sir *Francis Bacon*, on the importunity of his patron and friend.

NOBLE SIR,

WHAT you requeſted of me by word, when I laſt waited on you, you have ſince renewed by your letters. Your requeſts are commands unto me; and yet the matter is of that nature, that I find my ſelf very unable to ſerve you therein as you deſire. It hath pleaſed the king to caſt an extraordinary eye of favour upon you, and you expreſs your ſelf very deſirous to win upon the judgment of your maſter, and not upon his affections only. I do very much commend your noble ambition herein; for favour ſo bottomed is like to be laſting; whereas, if it be built but upon the ſandy foundation of perſonal reſpects only, it cannot be long lived.

What is found in crotchets is borrowed from the original edition publiſhed in 4to, 1661.

[My lord, when the bleſſing of God (to whom in the firſt place I know you aſcribe your preferment) and the king's favour, purchaſed by your noble parts, promiſing as much as can be expected from a gentleman, had brought you to this high pitch of honour, to be in the eye and ear, and even in the boſom of your gracious maſter; and you had found by experience the trouble of all mens confluence, and for all matters to your ſelf, as a mediator between them and their ſovereign, you were pleaſed to lay this command upon me: Firſt in general, to give you my poor advice for your carriage in ſo eminent a place, and of ſo much danger if not wiſely diſcharged: Next in particular by what means to give diſpatches

to

to ſuitors of all ſorts, for the king's beſt ſervice, the ſuitors ſatisfaction, and your own eaſe. I humbly return you mine opinion in both theſe, ſuch as an hermit rather than a courtier can render.]

YET in this you have erred, in applying your ſelf to me, the moſt unworthy of your ſervants, to give aſſiſtance upon ſo weighty a ſubject.

YOU know, I am no courtier, nor vers'd in ſtate-affairs; my life, hitherto, hath rather been contemplative, than active; I have rather ſtudied books than men; I can but gueſs, at the moſt, at theſe things, in which you deſire to be adviſed: nevertheleſs, to ſhew my obedience, though with the hazard of my diſcretion, I ſhall yield unto you.

SIR, In the firſt place, I ſhall be bold to put you in mind of the preſent condition you are in; you are not only a courtier, but a bed-chamber man, and ſo are in the eye and ear of your maſter; but you are alſo a favourite; the favourite of the time, and ſo are in his boſom alſo; the world hath ſo voted you, and doth ſo eſteem of you, for kings and great princes, even the wiſeſt of them, have had their friends, their favourites, their privadoes, in all ages; for they have their affections as well as other men. Of theſe they make ſeveral uſes; ſometimes to communicate and debate their thoughts with them, and to ripen their judgments thereby; ſometimes to eaſe their cares by imparting them; and ſometimes to interpoſe them between themſelves and the envy or malice of their people (for kings cannot err, that muſt be diſcharged upon the ſhoulders of their miniſters; and they who are neareſt unto them muſt be content to bear the greateſt load.) [Remember then what your true condition is: the king himſelf is above the reach of his people, but cannot be above their cenſures; and you are his ſhadow, if either he commit an error, and is loth to avow it, but excuſes it upon his miniſters, of which you are firſt in the eye; or you commit the fault, or have willingly permitted it, and muſt ſuffer for it, and ſo perhaps you may be offer'd a ſacrifice to appeaſe the multitude.] But truly, ſir, I do not believe or ſuſpect that you are choſen to this eminency, out of the laſt of theſe conſiderations: for you ſerve ſuch a maſter, who by his wiſdom and goodneſs is as free from the malice or envy of his ſubjects, as, I think, I may truly ſay, ever any king was, who hath ſat upon his throne before him: but I am confident, his majeſty hath caſt his eyes upon you, as finding you to be ſuch as you ſhould be, or hoping to make you to be ſuch as he would have you to be; for this I may ſay without flattery, your outſide promiſeth as much as can be expected from a gentleman: but be it in the one reſpect, or other, it belongeth to you to take care of your ſelf, and to know well what the name of a favourite ſignifies. If you be choſen upon the former reſpects, you have reaſon to take care of your actions and deportment, out of your gratitude for the king's ſake; but if out of the latter, you ought to take the greater care for your own ſake.

YOU are as a new-riſen ſtar, and the eyes of all men are upon you; let not your own negligence make you fall like a meteor.

[REMEMBER well the great truſt you have undertaken; you are as a continual centinel, always to ſtand upon your watch to give him true intelligence. If you flatter him you betray him; if you conceal the truth of thoſe things from him which concern his juſtice or his honour (although not the ſafety of his perſon) you are as dangerous a traitor to his ſtate, as he that riſeth in arms againſt him. A falſe friend is more dangerous than an open enemy: kings are ſtyled gods upon earth, not abſolute;

lute; but *dixi dii eſtis*; and the next words are, *ſed moriemini ſicut homines*; they ſhall die like men, and then all their thoughts periſh. They cannot poſſibly ſee all things with their own eyes, nor hear all things with their own ears; they muſt commit many great truſts to their miniſters. Kings muſt be anſwerable to God almighty, to whom they are but vaſſals, for their actions, and for their negligent omiſſions: but the miniſters to kings, whoſe eyes, ears and hands they are, muſt be anſwerable to God and man for the breach of their duties, in violation of their truſts, whereby they betray them. Opinion is a maſter wheel in theſe caſes: that courtier who obtained a boon of the emperor, that he might every morning at his coming into his preſence humbly whiſper him in the ear and ſay nothing, aſked no unprofitable ſuit for himſelf: but ſuch a fancy raiſed only by opinion cannot be long lived, unleſs the man have ſolid worth to uphold it; otherwiſe when once diſcovered it vaniſheth ſuddenly. But when a favourite in court ſhall be raiſed upon the foundation of merits, and together with the care of doing good ſervice to the king, ſhall give good diſpatches to the ſuitors, then can he not chuſe but proſper.]

THE contemplation then of your preſent condition, muſt neceſſarily prepare you for action: what time can be well ſpar'd from your attendance on your maſter, will be taken up by ſuitors, whom you cannot avoid nor decline, without reproach. For if you do not already, you will ſoon find the throng of ſuitors attend you; for no man, almoſt, who hath to do with the king, will think himſelf ſafe, unleſs you be his good angel, and guide him; or at leaſt that you be not a *Malus Genius* againſt him: ſo that in reſpect of the king your maſter, you muſt be very wary, that you give him true information; and if the matter concern him in his government, that you do not flatter him; if you do, you are as great a traitor to him in the court of heaven, as he that draws his ſword againſt him; and in reſpect of the ſuitors which ſhall attend you, there is nothing will bring you more honour and more eaſe, than to do them what right in juſtice you may, and with as much ſpeed as you may: for believe it, ſir, next to the obtaining of the ſuit, a ſpeedy and a gentle denial (when the caſe will not bear it) is the moſt acceptable to ſuitors: they will gain by their diſpatch; whereas elſe they ſhall ſpend their time and money in attending; and you will gain, in the eaſe you will find in being rid of their importunity. But if they obtain what they reaſonably deſired, they will be doubly bound to you for your favour; *Bis dat qui cito dat*, it multiplies the courteſy, to do it with good words and ſpeedily.

THAT you may be able to do this with the beſt advantage, my humble advice is this; when ſuitors come unto you, ſet apart a certain hour in a day to give them audience: if the buſineſs be light and eaſy, it may by word only be delivered, and in a word be anſwered; but if it be either of weight or of difficulty, direct the ſuitor to commit it to writing, (if it be not ſo already) and then direct him to attend for his anſwer at a ſet time to be appointed, which would conſtantly be obſerved, unleſs ſome matter of great moment do interrupt it. When you have received the petitions, (and it will pleaſe the petitioners well, to have acceſs unto you to deliver them into your own hand) let your ſecretary firſt read them, and draw lines under the material parts thereof, (for the matter, for the moſt part, lies in a narrow room.) The petitions being thus prepared, do you conſtantly ſet apart an hour in a day to peruſe thoſe petitions; and after you have ranked them into ſeveral files, according to

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the ſubject matter, make choice of two or three friends, whoſe judgments and fidelities you believe you may truſt in a buſineſs of that nature; and recommend it to one or more of them, to inform you of their opinions, and of their reaſons for or againſt the granting of it. And if the matter be of great weight indeed, then it would not be amiſs to ſend ſeveral copies of the ſame petition to ſeveral of your friends, the one not knowing what the other doth, and deſire them to return their anſwers to you by a certain time, to be prefixed, in writing; ſo ſhall you receive an impartial anſwer, and by comparing the one with the other, (as out of *reſponſa prudentium)* you ſhall both diſcern the abilities and faithfulneſs of your friends, and be able to give a judgment thereupon as an oracle. But by no means truſt to your own judgment alone; for no man is omniſcient: nor truſt only to your ſervants, who may miſlead you or miſinform you; by which they may perhaps gain a few crowns, but the reproach will lie upon your ſelf, if it be not rightly carried.

For the facilitating of your diſpatches, my advice is farther, that you divide all the petitions, and the matters therein contained, under ſeveral heads; which, I conceive, may be fitly ranked into theſe eight ſorts.

I. Matters that concern religion, and the church and churchmen.

II. Matters concerning juſtice, and the laws, and the profeſſors thereof.

III. Councellors, and the council table, and the great offices and officers of the kingdom.

IV. Foreign negotiations and embaſſies.

V. Peace and war, both foreign and civil, and in that the navy and forts, and what belongs to them.

VI. Trade at home and abroad.

VII. Colonies, or foreign plantations.

VIII. The court and curiality.

And whatſoever will not fall naturally under one of theſe heads, believe me, ſir, will not be worthy of your thoughts, in this capacity we now ſpeak of. And of theſe ſorts, I warrant you, you will find enough to keep you in buſineſs.

I begin with the firſt, which concerns religion.

1. In the firſt place, be you your ſelf rightly perſuaded and ſettled in the true proteſtant religion, profeſſed by the church of *England*; which doubtleſs is as ſound and orthodox in the doctrine thereof, as any chriſtian church in the world.

[For religion, if any thing be offered to you touching it, or touching the church, or church-men, or church-government, rely not only upon your ſelf, but take the opinion of ſome grave and eminent divines, eſpecially ſuch as are ſad and diſcreet men, and exemplary for their lives.]

2. In this you need not be a monitor to your gracious maſter the king: the chiefeſt of his imperial titles is, to be *the defender of the faith*, and his learning is eminent, not only above other princes, but above other men; be but his ſcholar, and you are ſafe in that.

[If any queſtion be moved concerning the doctrine of the church of *England* expreſſed in the thirty nine articles, give not the leaſt ear to the movers thereof: that is ſo ſoundly and ſo orthodoxly ſettled, as cannot be queſtioned without extream danger to the honour and ſtability of our religion; which hath been ſealed with the blood of ſo many martyrs and confeſſors, as are famous through the chriſtian world. The enemies and under-

underminers thereof are the *Romiſh* catholicks (ſo ſtyling themſelves) on the one hand, whoſe tenets are inconſiſtent with the truth of religion profeſſed and proteſted by the church of *England*, (whence we are called proteſtants;) and the anabaptiſts, and ſeparatiſts, and ſectaries on the other hand, whoſe tenets are full of ſchiſm, and inconſiſtent with monarchy: for the regulating of either, there needs no other coercion than the due execution of the laws already eſtabliſhed by parliament.]

3. For the diſcipline of the church of *England* by biſhops, *&c.* I will not poſitively ſay, as ſome do, that it's *Jure Divino*; but this I ſay and think *ex animo*, that it is the neareſt to apoſtolical truth; and confidently I ſhall ſay, it is fitteſt for monarchy of all others. I will uſe no other authority to you, than that excellent proclamation ſet out by the king himſelf in the firſt year of his reign, and annexed before the book of common-prayer, which I deſire you to read; and if at any time there ſhall be the leaſt motion made for innovation, to put the king in mind to read it himſelf: it is moſt dangerous in a ſtate, to give ear to the leaſt alterations in government.

[If any attempt be made to alter the diſcipline of our church, although it be not an eſſential part of our religion, yet it is ſo neceſſary not to be raſhly altered, as the very ſubſtance of our religion will be intereſted in it: therefore I deſire you before any attempt be made of an innovation by your means, or by any interceſſion to your maſter, that you will firſt read over, and his majeſty call to mind that wiſe and weighty proclamation, which himſelf penned, and cauſed to be publiſhed in the firſt year of his reign, and is prefixed in print before the book of common prayer (of that impreſſion;) in which you will find ſo prudent, ſo weighty reaſons, not to hearken to innovations, as will fully ſatisfy you, that it is dangerous to give the leaſt ear to ſuch innovators; but it is deſperate to be miſled by them: and to ſettle your judgment, mark but the admonition of the wiſeſt of men, king *Solomon*, Prov. xxiv. 21. *My ſon, fear God and the king, and meddle not with thoſe who are given to change.*]

4. Take heed, I beſeech you, that you be not an inſtrument to countenance the *Romiſh* catholicks. I cannot flatter, the world believes that ſome near in blood to you are too much of that perſuaſion; you muſt uſe them with fit reſpects, according to the bonds of nature; but you are of kin, and ſo a friend to their perſons, not to their errors.

5. The archbiſhops and biſhops, next under the king, have the government of the church and eccleſiaſtical affairs: be not you the mean to prefer any to thoſe places, for any by-reſpects; but only for their learning, gravity and worth; their lives and doctrine ought to be exemplary.

6. For deans, and canons or prebends of cathedral churches: in their firſt inſtitution they were of great uſe in the church; they were not only to be of counſel with the biſhop for his revenue, but chiefly for his government in cauſes eccleſiaſtical: uſe your beſt means to prefer ſuch to thoſe places who are fit for that purpoſe, men eminent for their learning, piety and diſcretion, and put the king often in mind thereof; and let them be reduced again to their firſt inſtitution.

7. You will be often ſolicited, and perhaps importuned to prefer ſcholars to church livings: you may further your friends in that way, *caeteris paribus*; otherwiſe remember, I pray, that theſe are not places merely of favour, the charge of ſouls lies upon them; the greateſt account whereof will

will be required at their own hands; but they will ſhare deeply in their faults who are the inſtruments of their preferment.

8. Besides the *Romiſh* catholicks, there is a generation of ſectaries, the anabaptiſts, browniſts, and others of their kinds; they have been ſeveral times very buſy in this kingdom, under the colour of zeal for reformation of religion: the king your maſter knows their diſpoſition very well; a ſmall touch will put him in mind of them; he had experience of them in *Scotland*, I hope he will beware of them in *England*; a little countenance or connivency ſets them on fire.

9. Order and decent ceremonies in the church are not only comely, but commendable; but there muſt be great care not to introduce innovations, they will quickly prove ſcandalous; men are naturally over-prone to ſuſpicion; the true proteſtant religion is ſeated in the golden mean; the enemies unto her are the extreams on either hand.

10. The perſons of churchmen are to be had in due reſpect for their work's ſake, and protected from ſcorn; but if a clergyman be looſe and ſcandalous, he muſt not be patroniz'd nor wink'd at; the example of a few ſuch corrupt many.

11. Great care muſt be taken, that the patrimony of the church be not ſacrilegiouſly diverted to lay uſes: his majeſty in his time hath religiouſly ſtopped a leak that did much harm, and would elſe have done more. Be ſure, as much as in you lies, ſtop the like upon all occaſions.

12. Colleges and ſchools of learning are to be cheriſhed and encouraged, there to breed up a new ſtock to furniſh the church and commonwealth when the old ſtore are tranſplanted. This kingdom hath in later ages been famous for good literature; and if preferment ſhall attend the deſervers, there will not want ſupplies.

II. Next to religion, let your care be to promote juſtice. By juſtice and mercy is the king's throne eſtabliſhed.

1. Let the rule of juſtice be the laws of the land, an impartial arbiter between the king and his people, and between one ſubject and another: I ſhall not ſpeak ſuperlatively of them, leſt I be ſuſpected of partiality, in regard of my own profeſſion; but this I may truly ſay, they are ſecond to none in the chriſtian world.

[They are the beſt, the equalleſt in the world between prince and people; by which the king hath the juſteſt prerogative, and the people the beſt liberty: and if at any time there be an unjuſt deviation, *Hominis eſt vitium, non profeſſionis.*]

2. And, as far as it may lie in you, let no arbitrary power be intruded; the people of this kingdom love the laws thereof, and nothing will oblige them more, than a confidence of the free enjoying of them; what the nobles upon an occaſion once ſaid in parliament, *Nolumus leges Angliae mutari*, is imprinted in the hearts of all the people.

3. But becauſe the life of the laws lies in the due execution and adminiſtration of them, let your eye be, in the firſt place, upon the choice of good judges: theſe properties had they need to be furniſhed with; to be learned in their profeſſion, patient in hearing, prudent in governing, powerful in their elocution to perſuade and ſatisfy both the parties and hearers, juſt in their judgment: and, to ſum up all, they muſt have theſe three attributes; they muſt be men of courage, fearing God, and hating covetouſneſs; an ignorant man cannot, a coward dares not, be a good judge.

4. By no means be you perſuaded to interpoſe your ſelf, either by word or letter, in any cauſe depending, or like to be depending in any court of juſtice, nor ſuffer any other great man to do it where you can hinder it, and by all means diſſuade the king himſelf from it, upon the importunity of any for themſelves or their friends: if it ſhould prevail, it perverts juſtice; but if the judge be ſo juſt, and of ſuch courage, (as he ought to be) as not to be inclined thereby, yet it always leaves a taint of ſuſpicion behind it; judges muſt be as chaſte as *Caeſar*'s wife, neither to be, nor to be ſuſpected to be unjuſt; and, ſir, the honour of the judges in their judicature, is the king's honour, whoſe perſon they repreſent.

5. There is great uſe of the ſervice of the judges in their circuits, which are twice in the year held throughout the kingdom; the trial of cauſes between party and party, or delivering of the goals in the ſeveral counties, are of great uſe for the expedition of juſtice; yet they are of much more uſe for the government of the counties through which they paſs, if that were well thought upon.

6. For if they had inſtructions to that purpoſe, they might be the beſt intelligencers to the king of the true ſtate of his whole kingdom, of the diſpoſition of the people, of their inclinations, of their intentions and motions, which are neceſſary to be truly underſtood.

7. To this end I could wiſh, that againſt every circuit all the judges ſhould, ſometimes by the king himſelf, and ſometimes by the lord chancellor or lord keeper, in the king's name, receive a charge of thoſe things which the preſent times did much require; and at their return ſhould deliver a faithful account thereof, and how they found and left the counties through which they paſſed, and in which they kept their aſſizes.

8. And that they might the better perform this work, which might be of great importance, it will not be amiſs that ſometimes this charge be publick, as it uſeth to be in the ſtar-chamber, at the end of the terms next before the circuit begins, where the king's care of juſtice, and the good of his people, may be publiſhed; and that ſometimes alſo it may be private, to communicate to the judges ſome things not ſo fit to be publickly delivered.

9. I could wiſh alſo, that the judges were directed to make a little longer ſtay in a place than uſually they do; a day more in a county would be a very good addition; although their wages for their circuits were increaſed in proportion, it would ſtand better with the gravity of their employment; whereas now they are ſometimes enforced to riſe over-early, and to ſit over-late, for the diſpatch of their buſineſs, to the extraordinary trouble of themſelves and of the people, their times indeed not being *horae juridicae*; and, which is the main, they would have the more leiſure to inform themſelves *(quaſi aliud agentes)* of the true eſtate of the countrey.

10. The attendance of the ſheriffs of the counties, accompanied with the principal gentlemen, in a comely, not a coſtly equipage, upon the judges of aſſize at their coming to the place of their ſitting, and at their going out, is not only a civility, but of uſe alſo: it raiſeth a reverence to the perſons and places of the judges, who coming from the king himſelf on ſo great an errand, ſhould not be neglected.

11. If any ſue to be made a judge, for my own part, I ſhould ſuſpect him: but if either directly or indirectly he ſhould bargain for a place of judi-

judicature, let him be rejected with ſhame; *vendere jure poteſt, emerat ille prius.*

12. When the place of a chief judge of a court becomes vacant, a puiſne judge of that court, or of another court, who hath approved himſelf fit and deſerving, ſhould be ſometimes preferred; it would be a good encouragement for him, and for others by his example.

13. Next to the judge, there would be care uſed in the choice of ſuch as are called to the degree of ſerjeants at law, (for ſuch they muſt be firſt before they be made judges:) none ſhould be made ſerjeants but ſuch as probably might be held fit to be judges afterwards, when the experience at the bar hath fitted them for the bench: therefore by all means cry down that unworthy courſe of late times uſed, that they ſhould pay moneys for it; it may ſatisfy ſome courtiers, but it is no honour to the perſon ſo preferred, nor to the king, who thus prefers them.

14. For the king's councel at the law, eſpecially his attorney and ſolicitor general, I need ſay nothing: their continual uſe for the king's ſervice, not only for his revenue, but for all the parts of his government, will put the king, and thoſe who love his ſervice, in mind to make choice of men every way fit and able for that employment; they had need to be learned in their profeſſion, and not ignorant in other things; and to be dexterous in thoſe affairs whereof the diſpatch is committed to them.

15. The king's attorney of the court of wards is in the true quality of the judges; therefore what hath been obſerved already of judges, which are intended principally of the three great courts of law at *Weſtminſter*, may be applied to the choice of the attorney of this court.

16. The like for the attorney of the duchy of *Lancaſter*, who partakes of both qualities, partly of a judge in that court, and partly of an attorney general; for ſo much as concerns the proper revenue of the duchy.

17. I must not forget the judges of the four circuits in the twelve ſhires of *Wales*, who although they are not of the firſt magnitude, nor need be of the degree of the coif (only the chief juſtice of *Cheſter*, who is one of their number, is ſo,) yet are they conſiderable in the choice of them, by the ſame rules as the other judges are; and they ſometimes are, and fitly may be, tranſplanted into the higher courts.

18. There are many courts (as you ſee) ſome ſuperior, ſome provincial, and ſome of a lower orb: it were to be wiſhed, and is fit to be ſo ordered, that every of them keep themſelves within their proper ſpheres. The harmony of juſtice is then the ſweeteſt, when there is no jarring about the juriſdiction of the courts; which methinks wiſdom cannot much differ upon, their true bounds being for the moſt part ſo clearly known.

19. Having ſaid thus much of the judges, ſomewhat will be fit to put you in mind concerning the principal miniſters of juſtice: and in the firſt, of the high ſheriffs of the counties, which have been very ancient in this kingdom; I am ſure before the conqueſt: the choice of them I commend to your care, and that at fit times you put the king in mind thereof; that as near as may be they be ſuch as are fit for thoſe places: for they are of great truſt and power; the *poſſe comitatus*, the power of the whole county being legally committed unto him.

20. Therefore it is agreeable with the intention of the law, that the choice of them ſhould be by the commendation of the great officers of the kingdom, and by the advice of the judges, who are preſumed to be

well read in the condition of the gentry of the whole kingdom: and although the king may do it of himſelf, yet the old way is the good way.

21. But I utterly condemn the practice of the later times, which hath lately crept into the court (at the back-ſtairs) that ſome who are prick'd for ſheriffs, and were fit, ſhould get out of the bill, and others who were neither thought upon, nor worthy to be, ſhould be nominated, and both for money.

22. I must not omit to put you in mind of the lords lieutenants, and deputy lieutenants of the counties: their proper uſe is for ordering the military affairs, in order to an invaſion from abroad, or a rebellion or ſedition at home; good choice ſhould be made of them, and prudent inſtructions given to them, and as little of the arbitrary power as may be left unto them; and that the muſter-maſters, and other officers under them, incroach not upon the ſubject; that will detract much from the king's ſervice.

23. The juſtices of peace are of great uſe. Anciently there were conſervators of the peace, theſe are the ſame, ſaving that ſeveral acts of parliament have altered their denomination, and enlarged their juriſdiction in many particulars: the fitter they are for the peace of the kingdom, the more heed ought to be taken in the choice of them.

24. But negatively, this I ſhall be bold to ſay, that none ſhould be put into either of thoſe commiſſions, with an eye of favour to their perſons, to give them countenance or reputation in the places where they live, but for the king's ſervice ſake; nor any put out for the diſfavour of any great man: it hath been too often uſed, and hath been no good ſervice to the king.

25. A word more, if you pleaſe to give me leave, for the true rules of the moderation of juſtice on the king's part. The execution of juſtice is committed to his judges, which ſeemeth to be the ſeverer part; but the milder part, which is mercy, is wholly left in the king's immediate hand: and juſtice and mercy the true ſupporters of his royal throne.

26. If the king ſhall be wholly intent upon juſtice, it may appear with an over-rigid aſpect; but if he ſhall be over-remiſs and eaſy, it draweth upon him contempt. Examples of juſtice muſt be made ſometimes for terror to ſome; examples of mercy ſometimes, for comfort to others: the one procures fear, and the other love. A king muſt be both feared and loved, elſe he is loſt.

27. The ordinary courts of juſtice I have ſpoken of, and of their judges and judicature: I ſhall put you in mind of ſome things touching the high court of parliament in *England*, which is ſuperlative; and therefore it will behove me to ſpeak the more warily thereof.

28. For the inſtitution of it, it is very ancient in this kingdom: it conſiſteth of the two houſes, of peers and commons, as the members; and of the king's majeſty, as the head of that great body: by the king's authority alone, and by his writs, they are aſſembled, and by him alone are they prorogued and diſſolved, but each houſe may adjourn it ſelf.

29. They being thus aſſembled, are more properly a council to the king, the great council of the kingdom, to adviſe his majeſty in thoſe things of weight and difficulty, which concern both the king and people, than a court.

30. No new laws can be made, nor old laws abrogated or altered, but by common conſent in parliament, where bills are prepared and preſented

to

to the two houſes, and then delivered, but nothing is concluded but by the king's royal aſſent; they are but embryos, 'tis he giveth life unto them.

31. YET the houſe of peers hath a power of judicature in ſome caſes; properly to examine, and then to affirm; or if there be cauſe to reverſe the judgments which have been given in the court of king's bench, (which is the court of higheſt juriſdiction in the kingdom for ordinary judicature:) but in theſe caſes it muſt be done by writ of error *in parliamento:* and thus the rule of their proceedings is not *abſoluta poteſtas*, as in making new laws (in that conjuncture as before;) but *limitata poteſtas*, according to the known laws of the land.

32. BUT the houſe of commons have only power to cenſure the members of their own houſe, in point of election or miſdemeanors, in or towards that houſe; and have not, nor ever had power, ſo much as to adminiſter an oath to prepare a judgment.

33. THE true uſe of parliaments in this kingdom is very excellent; and they would be often called, as the Affairs of the kingdom ſhall require; and continued as long as is neceſſary and no longer: for then they be but burthens to the people, by reaſon of the privileges juſtly due to the members of the two houſes and their attendants; which their juſt rights and privileges are religiouſly to be obſerved and maintained: but if they ſhould be unjuſtly enlarged beyond their true bounds, they might leſſen the juſt power of the crown, it borders ſo near upon popularity.

34. ALL this while I have ſpoken concerning the common laws of *England*, generally and properly ſo called, becauſe it is moſt general and common to almoſt all caſes and cauſes, both civil and criminal: but there is alſo another law, which is called the civil or eccleſiaſtical law, which is confined to ſome few heads, and that is not to be neglected: and although I am a profeſſor of the common law, yet I am ſo much a lover of truth and of learning, and of my native countrey, that I do heartily perſuade that the profeſſors of that law, called civilians (becauſe the civil law is their guide) ſhould not be diſcountenanced nor diſcouraged: elſe whenſoever we ſhall have aught to do with any foreign king or ſtate, we ſhall be at a miſerable loſs, for want of learned men in that profeſſion.

III. I COME now to the conſideration of thoſe things which concern councellors of ſtate, the council table, and the great offices and officers of the kingdom; which are thoſe who for the moſt part furniſh out that honourable board.

1. OF councellors, there are two ſorts: the firſt, *conſiliarii nati*, (as I may term them:) ſuch are the prince of *Wales*, and others of the king's ſons, (when he hath more;) of theſe I ſpeak not, for they are naturally born to be councellors to the king, to learn the art of governing betimes.

2. BUT the ordinary ſort of councellors are ſuch as the king, out of a due conſideration of their worth and abilities, and withal, of their fidelities to his perſon and to his crown, calleth to be of council with him, in his ordinary government. And the council table is ſo called from the place where they ordinarily aſſemble and ſit together; and their oath is the only ceremony uſed, to make them ſuch, which is ſolemnly given unto them, at their firſt admiſſion: theſe honourable perſons are from thenceforth of that board and body: they cannot come until they be thus called, and the king at his pleaſure may ſpare their attendance; and he may diſpenſe with their preſence there, which at their own pleaſure they may not do.

3. THIS

3. This being the quality of their ſervice, you may eaſily judge what care the king ſhould uſe, in his choice of them. It behoveth that they be perſons of great truſt and fidelity, and alſo of wiſdom and judgment, who ſhall thus aſſiſt in bearing up the king's throne, and of known experience in publick affairs.

4. Yet it may not be unfit to call ſome of young years, to train them up in that trade, and ſo fit them for thoſe weighty affairs, againſt the time of greater maturity; and ſome alſo for the honour of their perſons: but theſe two ſorts not to be tied to ſo ſtrict attendance, as the others from whom the preſent diſpatch of buſineſs is expected.

5. I could wiſh that their number might not be ſo over-great; the perſons of the councellors would be the more venerable: And I know that queen *Elizabeth*, in whoſe time I had the happineſs to be born, and to live many years, was not ſo much obſerved, for having a numerous, as a wiſe, council.

6. The duty of a privy councellor to a king, I conceive, is, not only to attend the council board, at the times appointed, and there to conſult of what ſhall be propounded; but alſo to ſtudy thoſe things which may advance the king's honour and ſafety, and the good of the kingdom, and to communicate the ſame to the king, or to his fellow-councellors, as there ſhall be occaſion. And this, ſir, will concern you more than others, by how much you have a larger ſhare in his affections.

7. And one thing I ſhall be bold to deſire you to recommend to his majeſty: that when any new thing ſhall be propounded to be taken into conſideration, that no councellor ſhould ſuddenly deliver any poſitive opinion thereof; it is not ſo eaſy with all men to retract their opinions, although there ſhall be cauſe for it: but only to hear it, and at the moſt but to break it, at firſt, that it may be the better underſtood againſt the next meeting.

8. When any matter of weight hath been debated, and ſeemeth to be ready for a reſolution; I wiſh it may not be at that ſitting concluded (unleſs the neceſſity of the time preſs it;) leſt upon ſecond cogitations there ſhould be cauſe to alter; which is not for the gravity and honour of that board.

9. I wish alſo that the king would be pleaſed ſometimes to be preſent at that board; it adds a majeſty to it: and yet not to be too frequently there, that would render it leſs eſteemed when it is become common; beſides, it may ſometimes make the councellors not to be ſo free in their debates in his preſence, as they would be in his abſence.

10. Besides the giving of counſel, the councellors are bound by their duties *ex vi termini*, as well as by their oaths, to keep counſel; therefore they are called *de privato conſilio regis, & a ſecretioribus conſiliis regis.*

11. One thing I add, in the negative, which is not fit for that board, the entertaining of private cauſes, of *meum & tuum*; thoſe ſhould be left to the ordinary courſe and courts of juſtice.

As there is great care to be uſed, for the councellors themſelves to be choſen; ſo there is of the clerks of the council alſo, for the ſecreting of their conſultations: and methinks, it were fit that his majeſty be ſpeedily moved to give a ſtrict charge, and to bind it with a ſolemn order (if it be not already ſo done,) that no copies of the orders of that Table be delivered out by the clerks of the council, but by the order of the board; nor any, not being a councellor, or a clerk of the council, or his clerk, to have acceſs to the council books: and to that puoſe, that the ſervants attending

attending the clerks of the council be bound to ſecrecy, as well as their maſters.

13. For the great offices and officers of the kingdom, I ſhall ſay little; for the moſt part of them are ſuch, as cannot well be ſever'd from the councellorſhip; and therefore the ſame rule is to be obſerved for both, in the choice of them. In the general, only, I adviſe this, let them be ſet in thoſe places for which they are probably the moſt fit.

14. But in the quality of the perſons, I conceive it will be moſt convenient to have ſome of every ſort, (as in the time of queen *Elizabeth* it was:) one biſhop at the leaſt, in reſpect of queſtions touching religion, or church government; one or more ſkilled in the laws; ſome for martial affairs; and ſome for foreign affairs: by this mixture one will help another in all things that ſhall there happen to be moved. But if that ſhould fail, it will be a ſafe way, to conſult with ſome other able perſons well verſed in that point which is the ſubject of their conſultation; which yet may be done ſo warily, as may not diſcover the main end therein.

IV. In the next place, I ſhall put you in mind of foreign negotiations and embaſſies, to or with foreign princes or ſtates; wherein I ſhall be little able to ſerve you.

1. Only, I will tell you what was the courſe in the happy days of queen *Elizabeth*, whom it will be no diſ-reputation to follow: ſhe did vary, according to the nature of the employment, the quality of the perſons ſhe employed; which is a good rule to go by.

2. If it were an embaſſy of gratulation or ceremony (which muſt not be neglected,) choice was made of ſome noble perſon, eminent in place, and able in purſe; and he would take it as a mark of favour, and diſcharge it without any great burthen to the queen's coffers, for his own honour's ſake.

3. But if it were an embaſſy of weight, concerning affairs of ſtate, choice was made of ſome ſad perſon of known judgment, wiſdom and experience, and not of a young man, not weighed in ſtate matters: nor of a mere formal man, whatſoever his title or outſide were.

4. Yet in company of ſuch, ſome young towardly noblemen or gentlemen were uſually ſent alſo, as aſſiſtants or attendants, according to the quality of the perſons; who might be thereby prepared and fitted for the like employment, by this means, at another turn.

5. In their company were always ſent ſome grave and ſad men, ſkilful in the civil laws, and ſome in the languages, and ſome who had been formerly converſant in the courts of thoſe princes, and knew their ways; theſe were aſſiſtants in private, but not truſted to manage the affairs in publick; that would detract from the honour of the principal embaſſador.

6. If the negotiation were about merchants affairs, then were the perſons employed for the moſt part doctors of the civil law, aſſiſted with ſome other diſcreet men; and in ſuch, the charge was ordinarily defrayed by the company or ſociety of merchants, whom the negotiation concerned.

7. If legier embaſſadors or agents were ſent to remain in or near the courts of thoſe princes or ſtates (as it was ever held fit, to obſerve the motions, and to hold correſpondence with them, upon all occaſions) ſuch were made choice of as were preſumed to be vigilant, induſtrious, and diſcreet men, and had the language of the place whither they were ſent; and with theſe were ſent ſuch as were hopeful to be worthy of the like employment at another time.

8. Their

8. THEIR care was, to give true and timely intelligence of all occurrences, either to the queen herſelf, or the ſecretaries of ſtate, unto whom they had their immediate relation.

9. THEIR charge was always born by the queen, duly paid out of the exchequer, in ſuch proportion, as, according to their qualities and places, might give them an honourable ſubſiſtence there: but for the reward of their ſervice, they were to expect it upon their return, by ſome ſuch preferment as might be worthy of them, and yet be little burthen to the queen's coffers or revenues.

10. AT their going forth they had their general inſtructions in writing, which might be communicated to the miniſters of that ſtate, whither they were ſent; and they had alſo private inſtructions, upon particular occaſions; and at their return, they did always render an account of ſome things to the queen her ſelf, of ſome things to the body of the council, and of ſome others to the ſecretaries of ſtate; who made uſe of them, or communicated them, as there was cauſe.

11. IN thoſe days there was a conſtant courſe held, that by the advice of the ſecretaries, or ſome principal counſellors, there were always ſent forth, into ſeveral parts beyond the ſeas, ſome young men, of whom good hopes were conceived of their towardlineſs, to be trained up, and made fit for ſuch publick employments, and to learn the languages. This was at the charge of the queen, which was not much; for they travelled but as private gentlemen: and as by their induſtry their deſerts did appear, ſo were they farther employed or rewarded. This courſe I ſhall recommend unto you, to breed up a nurſery of ſuch publick plants.

V. For peace and war, and thoſe things which appertain to either; I in my own diſpoſition and profeſſion am wholly for peace, if pleaſe God to bleſs this kingdom therewith, as for many years paſt he hath done: and,

1. I PRESUME I ſhall not need to perſuade you to the advancing of it; nor ſhall you need to perſuade the king your maſter therein, for that he hath hitherto been another *Solomon*, in this our *Iſrael*, and the motto which he hath choſen *(Beati Pacifici)* ſhews his own judgment: but he muſt uſe the means to preſerve it, elſe ſuch a jewel may be loſt.

2. GOD is the God of peace (it is one of his attributes;) therefore by him alone we muſt pray, and hope to continue it: there is the foundation.

3. AND the king muſt not neglect the juſt ways for it; juſtice is the beſt protector of it at home, and providence for war is the beſt prevention of it from abroad.

4. WARS are either foreign or civil; for the foreign war by the king upon ſome neighbour nation, I hope we are ſecure; the king, in his pious and juſt diſpoſition is not inclinable thereunto, his empire is long enough; bounded with the ocean, as if the very ſituation thereof had taught the king and people to ſet up their reſts, and ſay, *Ne plus ultra.*

5. AND for a war of invaſion from abroad; only we muſt not be overſecure: that's the way to invite it.

6. BUT if we be always prepared to receive an enemy, if the ambition or malice of any ſhould incite him, we may be very confident we ſhall long live in peace and quietneſs, without any attempts upon us.

7. TO make the preparations hereunto the more aſſured: in the the firſt place, I will recommend unto you the care of our out-work, the navy royal and ſhipping of our kingdom, which are the walls thereof: and every great ſhip is as an impregnable fort; and our many ſafe and commodious

dious ports and havens, in every of theſe kingdoms, are as the redoubts to ſecure them.

8. For the body of the ſhips, no nation of the world doth equal *England*, for the oaken timber wherewith to build them; and we need not borrow of any other, iron for ſpikes, or nails to faſten them together; but there muſt be a great deal of providence uſed, that our ſhip-timber be not unneceſſarily waſted.

9. But for tackling, as ſails and cordage, we are beholden to our neighbours for them, and do buy them for our money; that muſt be foreſeen and layed up in ſtore againſt a time of need, and not ſought for when we are to uſe them: but we are much to blame that we make them not at home, only pitch and tar we have not of our own.

10. For the true art of building of ſhips, for burthen and ſervice both, no nation in the world exceeds us: ſhip-wrights and all other artiſans belonging to that trade muſt be cheriſhed and encouraged.

11. Powder and ammunition of all ſorts we can have at home, and in exchange for other home commodities we may be plentifully ſupplied from our neighbours, which muſt not be neglected.

12. With mariners and ſeamen this kingdom is plentifully furniſhed: the conſtant trade of merchandizing will furniſh us at a need; and navigable rivers will repair the ſtore, both to the navy royal and to the merchants, if they be ſet on work, and well paid for their labour.

13. Sea captains and commanders and other officers muſt be encouraged, and riſe by degrees, as their fidelity and induſtry deſerve it.

[Let brave ſpirits that have fitted themſelves for command, either by ſea or land, not be laid by, as perſons unneceſſary for the time; let arms and ammunition of all ſorts be provided and ſtored up, as againſt a day of battel; let the ports and forts be fitted ſo, as if by the next wind we ſhould hear of an alarum; ſuch a known providence is the ſureſt protection. But of all wars, let both prince and people pray againſt a war in our own bowels: the king by his wiſdom, juſtice and moderation, muſt foreſee and ſtop ſuch a ſtorm, and if it fall muſt allay it; and the people by their obedience muſt decline it. And for a foreign war intended by an invaſion to inlarge the bounds of our empire, which are large enough, and are naturally bounded with the ocean, I have no opinion either of the juſtneſs or fitneſs of it; and it were a very hard matter to attempt it with hope of ſucceſs, ſeeing the ſubjects of this kingdom believe it is not legal for them to be enforced to go beyond the ſeas, without their own conſent upon hope of an unwarranted conqueſt; but to reſiſt an invading enemy, or to ſuppreſs rebels, the ſubject may and muſt be commanded out of the counties where they inhabit. The whole kingdom is but one intire body, elſe it will neceſſarily be verified, which elſewhere was aſſerted, *Dum ſinguli pugnamus, omnes vincimur.*]

14. Our ſtrict league of amity and alliance with our near neighbours the *Hollanders*, is a mutual ſtrength to both; the ſhipping of both, in conjuncture, being ſo powerful, by God's bleſſing, as no foreigners will venture upon; this league and friendſhip muſt inviolably be obſerved.

15. From *Scotland* we have had in former times ſome alarms, and inrodes into the northern parts of this kingdom; but that happy union of both kingdoms under one ſovereign, our gracious king, I hope, hath taken away all occaſions of breach between the two nations. Let not the cauſe ariſe from *England*, and I hope the *Scots* will not adventure it; or if they

do, I hope they will find, that although to our king they were his firſt-born ſubjects, yet to *England* belongs the birthright: but this ſhould not be any cauſe to offer any injury to them, nor to ſuffer any from them.

16. THERE remains then no danger, by the bleſſing of God, but a civil war, from which God of his mercy defend us, as that which is moſt deſperate of all others. The king's wiſdom and juſtice muſt prevent it, if it may be; or if it ſhould happen, *quod abſit*, he muſt quench that wild-fire, with all the diligence that poſſibly can be.

17. COMPETITION to the crown, there is none, nor can be, therefore it muſt be a fire within the bowels, or nothing; the cures whereof are theſe, *Remedium praeveniens*, which is the beſt phyſick, either to a natural body, or to a ſtate, by juſt and equal government to take away the occaſion; and *Remedium puniens*, if the other prevail not: the ſervice and vigilancy of the deputy lieutenants in every county, and of the high ſheriff, will contribute much herein to our ſecurity.

18. BUT if that ſhould not prevail, by a wiſe and timous inquiſition, the peccant humours and humoriſts muſt be diſcovered, and purged, or cut off; mercy, in ſuch a caſe, in a king, is true cruelty.

19. YET if the heads of the tribes can be taken off, and the miſ-led multitude will ſee their error, and return to their obedience, ſuch an extent of mercy is both honourable and profitable.

20. A KING, againſt a ſtorm, muſt foreſee, to have a convenient ſtock of treaſure; and neither be without money, which is the ſinews of war, nor to depend upon the curteſy of others, which may fail at a pinch.

21. HE muſt alſo have a magazine of all ſorts, which muſt be had from foreign parts, or provided at home, and to commit them to ſeveral places, under the cuſtody of truſty and faithful miniſters and officers, if it be poſſible.

22. HE muſt make choice of expert and able commanders to conduct and manage the war, either againſt a foreign invaſion, or a home rebellion; which muſt not be young and giddy, which dare, not only to fight, but to ſwear, and drink, and curſe, neither fit to govern others, nor able to govern themſelves.

23. LET not ſuch be diſcouraged, if they deſerve well, by miſ-information, or for the ſatisfying the humours or ambition of others, perhaps, out of envy, perhaps, out of treachery, or other ſiniſter ends: a ſteddy hand, in governing of military affairs, is more requiſite than in times of peace, becauſe an error committed in war, may, perhaps, prove irremediable.

24. IF God ſhall bleſs theſe endeavours, and the king return to his own houſe in peace, when a civil war ſhall be at an end, thoſe who have been found faithful in the land muſt be regarded, yea, and rewarded alſo; the traitorous, or treacherous, who have miſ-led others, ſeverely puniſh'd; and the neutrals and falſe-hearted friends and followers, who have ſtarted aſide like a broken bow, be noted, *Carbone nigro*; and ſo I ſhall leave them, and this part of the work.

VI. I COME to the ſixth part, which is trade; and that is either at home or abroad. And I begin with that which is at home, which enableth the ſubjects of the kingdom to live, and layeth a foundation to a foreign trade by traffick with others, which enableth them to live plentifully and happily.

1. FOR the home trade, I firſt commend unto your conſideration the encouragement of tillage, which will enable the kingdom for corn for the natives

natives, and to ſpare for exportation: and I my ſelf have known, more than once, when, in times of dearth, in queen *Elizabeth*'s days, it drained much coin of the kingdom, to furniſh us with corn from foreign parts.

2. Good huſbands will find the means, by good huſbandry, to improve their lands, by lime, chalk, marl, or ſea-ſand, where it can be had: but it will not be amiſs, that they be put in mind thereof, and encouraged in their induſtries.

3. Planting of orchards, in a ſoil and air fit for them, is very profitable, as well as pleaſurable; cyder and perry are notable beverage in ſea voyages.

4. Gardens are alſo very profitable, if planted with artichokes, roots, and ſuch other things as are fit for food; whence they be called kitchen gardens, and that very properly.

5. The planting of hop-yards, ſowing of woad and rape-ſeed, are found very profitable for the planters, in places apt for them, and conſequently profitable for the kingdom, which for divers years was furniſhed with them from beyond the ſeas.

6. The planting and preſerving of woods, eſpecially of timber, is not only profitable, but commendable, therewith to furniſh poſterity, both for building and ſhipping.

7. The kingdom would be much improved, by draining of drowned lands, and gaining that in from the overflowing of ſalt waters and the ſea, and from freſh waters alſo.

8. And many of thoſe grounds would be exceeding fit for dairies, which, being well houſwived, are exceeding commodious.

9. Much good land might be gained from foreſts and chaſes, more remote from the king's acceſs, and from other commonable places, ſo as always there be a due care taken, that the poor commoners have no injury by ſuch improvement.

10. The making of navigable rivers would be very profitable; they would be as ſo many in-draughts of wealth, by conveying of commodities with eaſe from place to place.

11. The planting of hemp and flax would be an unknown advantage to the kingdom, many places therein being as apt for it, as any foreign parts.

12. But add hereunto, that if it be converted into linen-cloth or cordage, the commodity thereof will be multiplied.

13. So it is of the wools and leather of the kingdom, if they be converted into manufactures.

14. Our *Engliſh* dames are much given to the wearing of coſtly laces; and, if they be brought from *Italy*, or *France*, or *Flanders*, they are in great eſteem; whereas, if the like laces were made by the *Engliſh*, ſo much thred as would make a yard of lace, being put into that manufacture, would be five times, or perhaps, ten or twenty times the value.

15. The breeding of cattel is of much profit, eſpecially the breed of horſes, in many places, not only for travel, but for the great ſaddle; the *Engliſh* horſe, for ſtrength, and courage, and ſwiftneſs together, not being inferior to the horſes of any other kingdom.

16. The minerals of the kingdom, of lead, iron, copper, and tin, eſpecially, are of great value, and ſet many able-bodied ſubjects on work; it were great pity they ſhould not be induſtriouſly followed.

17. But of all minerals, there is none like to that of fiſhing, upon the coaſts of theſe kingdoms, and the ſeas belonging to them: our neighbours, within half a day's ſail of us, with a good wind, can ſhew us the uſe and value thereof; and, doubtleſs, there is ſea-room enough for both nations, without offending one another; and it would exceedingly ſupport the navy.

18. This realm is much enriched, of late years, by the trade of merchandize which the *Engliſh* drive in foreign parts; and, if it be wiſely managed, it muſt of neceſſity very much increaſe the wealth thereof: care being taken, that the exportation exceed in value the importation; for then the balance of trade muſt of neceſſity be returned in coin or bullion.

19. This would eaſily be effected, if the merchants were perſuaded, or compelled, to make their returns in ſolid commodities, and not too much thereof in vanity, tending to exceſs.

20. But eſpecially care muſt be taken, that monopolies, which are the cankers of all trading, be not admitted, under ſpecious colours of publick good.

21. To put all theſe into a regulation, if a conſtant commiſſion, to men of honeſty and underſtanding, were granted, and well purſued, to give order for the managing of theſe things, both at home and abroad, to the beſt advantage; and that this commiſſion were ſubordinate to the council-board; it is conceived, it would produce notable effects.

VII. The next thing is that of colonies and foreign plantations, which are very neceſſary, as out-lets, to a populous nation, and may be profitable alſo if they be managed in a diſcreet way.

1. First, in the choice of the place, which requireth many circumſtances; as, the ſituation, near the ſea, for the commodiouſneſs of an intercourſe with *England*; the temper of the air and climate, as may beſt agree with the bodies of the *Engliſh*, rather inclining to cold than heat; that it be ſtored with woods, mines, and fruits, which are naturally in the place; that the ſoil be ſuch as will probably be fruitful for corn, and other conveniencies, and for breeding of cattel; that it hath rivers, both for paſſage between place and place, and for fiſhing alſo, if it may be; that the natives be not ſo many, but that there may be elbow-room enough for them, and for the adventives alſo: all which are likely to be found in the *Weſt-Indies*.

2. It would be alſo ſuch as is not already planted by the ſubjects of any chriſtian prince or ſtate, nor over-nearly neighbouring to their plantation. And it would be more convenient, to be choſen by ſome of thoſe gentlemen or merchants which move firſt in the work, than to be deſigned unto them from the king; for it muſt proceed from the option of the people, elſe it ſounds like an exile; ſo the colonies muſt be raiſed by the leave of the king, and not by his command.

3. After the place is made choice of, the firſt ſtep muſt be, to make choice of a fit governor; who, although he have not the name, yet he muſt have the power of a viceroy; and if the perſon who principally moved in the work be not fit for that truſt, yet he muſt not be excluded from command; but then his defect in the governing part muſt be ſupplied by ſuch aſſiſtants as ſhall be joined with him, or as he ſhall very well approve of.

4. As at their ſetting out they muſt have their commiſſion, or letters patents from the king, that ſo they may acknowledge their dependency upon the

the crown of *England*, and under his protection; ſo they muſt receive ſome general inſtructions, how to diſpoſe of themſelves, when they come there, which muſt be in nature of laws unto them.

5. But the general law, by which they muſt be guided and governed, muſt be the common law of *England*; and to that end, it will be fit, that ſome man, reaſonably ſtudied in the law, and otherwiſe qualified for ſuch a purpoſe, be perſuaded (if not thereunto inclined of himſelf, which were the beſt) to go thither as chancellor amongſt them, at firſt; and when the plantation were more ſettled, then to have courts of juſtice there, as in *England*.

6. At the firſt planting, or as ſoon after as they can, they muſt make themſelves defenſible both againſt the natives, and againſt ſtrangers; and to that purpoſe, they muſt have the aſſiſtance of ſome able military man, and convenient arms and ammunition for their defence.

7. For the diſcipline of the church in thoſe parts, it will be neceſſary, that it agree with that which is ſettled in *England*, elſe it will make a ſchiſm and a rent in *Chriſt*'s coat, which muſt be ſeamleſs; and, to that purpoſe, it will be fit, that by the king's ſupreme power in cauſes eccleſiaſtical, within all his dominions, they be ſubordinate under ſome biſhop and biſhoprick of this realm.

8. For the better defence againſt a common enemy, I think it would be beſt, that foreign plantations ſhould be placed in one continent, and near together; whereas, if they be too remote, the one from the other, they will be diſunited, and ſo the weaker.

9. They muſt provide themſelves of houſes, ſuch as, for the preſent, they can, and, at more leiſure, ſuch as may be better; and they firſt muſt plant for corn and cattel, *&c.* for food and neceſſary ſuſtenance; and after, they may enlarge themſelves for thoſe things which may be for profit and pleaſure, and to traffick withal alſo.

10. Woods for ſhipping, in the firſt place, may doubtleſs be there had, and minerals there found, perhaps, of the richeſt; howſoever, the mines out of the fruits of the earth, and ſeas and waters adjoining, may be found in abundance.

11. In a ſhort time they may build veſſels and ſhips alſo, for traffick with the parts near adjoining, and with *England* alſo, from whence they may be furniſhed with ſuch things as they may want, and, in exchange or barter, ſend from thence other things, with which quickly, either by nature or art, they may abound.

12. But theſe things would, by all means, be prevented; that no known bankrupt, for ſhelter; nor known murderer or other wicked perſon, to avoid the law; nor known heretick or ſchiſmatick, be ſuffered to go into thoſe countreys; or, if they do creep in there, not to be harboured or continued: elſe, the place would receive them naught, and return them into *England*, upon all occaſions, worſe.

13. That no merchant, under colour of driving a trade thither, or from thence, be ſuffered to work upon their neceſſities.

14. And that to regulate all theſe inconveniencies, which will inſenſibly grow upon them, that the king be pleaſed to erect a ſubordinate council in *England*, whoſe care and charge ſhall be, to adviſe, and put in execution, all things which ſhall be found fit for the good of thoſe new plantations; who, upon all occaſions, ſhall give an account of their proceedings to the king, or to the council-board, and from them receive ſuch directions as may beſt agree with the government of that place.

15. That

15. That the king's reaſonable profit be not neglected, partly, upon reſervation of moderate rents and ſervices; and, partly, upon cuſtoms; and partly, upon importation and exportation of merchandize; which for a convenient time after the plantation begin, would be very eaſy, to encourage the work; but, after it is well ſettled, may be raiſed to a conſiderable proportion, worthy the acceptation.

[Yet theſe cautions are to be obſerved in theſe undertakings:

1. That no man be compelled to ſuch an employment; for that were a baniſhment and not a ſervice fit for a free man.

2. That if any tranſplant themſelves into plantations abroad, who are known ſchiſmaticks, outlaws, or criminal perſons, that they be ſent for back upon the firſt notice; ſuch perſons are not fit to lay the foundation of a new colony.

3. To make no extirpation of the natives under pretence of planting religion: God ſurely will no way be pleaſed with ſuch ſacrifices.

4. That the people ſent thither be governed according to the laws of this realm, whereof they are, and ſtill muſt be ſubjects.

5. To eſtabliſh there the ſame purity of religion, and the ſame diſcipline for church government, without any mixture of popery or anabaptiſm, leſt they ſhould be drawn into factions and ſchiſms, and that place receive them there bad, and ſend them back worſe.

6. To employ them in profitable trades and manufactures, ſuch as the clime will beſt fit, and ſuch as may be uſeful to this kingdom, and return to them an exchange of things neceſſary.

7. That they be furniſhed and inſtructed for the military part, as they may defend themſelves; leſt, on a ſudden, they be expoſed as a prey to ſome other nation, when they have fitted the colony for them.

8. To order a trade thither, and thence, in ſuch a manner as ſome few merchants and tradeſmen, under colour of furniſhing the colony with neceſſaries, may not grind them, ſo as ſhall always keep them in poverty.

9. To place over them ſuch governors as may be qualified in ſuch manner as may govern the place, and lay the foundation of a new kingdom.

10. That care be taken, that when the induſtry of one man hath ſettled the work, a new man, by inſinuation or miſinformation, may not ſupplant him without a juſt cauſe, which is the diſcouragement of all faithful endeavours.

11. That the king will appoint commiſſioners in the nature of a council, who may ſuperintend the works of this nature, and regulate what concerns the colonies, and give an account thereof to the king, or to his council of ſtate.

Again, For matter of trade, I confeſs, it is out of my profeſſion, yet in that I ſhall make a conjecture alſo, and propound ſome things to you, whereby (if I am not much miſtaken) you may advance the good of your country and profit of your maſter.

1. Let the foundation of a profitable trade be thus laid, that the exportation of home commodities be more in value, than the importation of foreign; ſo we ſhall be ſure that the ſtocks of the kingdom ſhall yearly increaſe, for then the balance of trade muſt be returned in money or bullion.

2. In the importation of foreign commodities, let not the merchant return toys and vanities (as ſometimes it was elſewhere apes and peacocks) but ſolid merchandize, firſt for neceſſity, next for pleaſure, but not for luxury.

3. Let

3. Let the vanity of the times be reſtrained, which the neighbourhood of other nations have induced; and we ſtrive apace to exceed our pattern: let vanity in apparel, and, which is more vain, that of the faſhion, be avoided. I have heard, that in *Spain*, (a grave nation, whom in this I wiſh we might imitate) they do allow the players and courteſans the vanity of rich and coſtly clothes; but to ſober men and matrons they permit it not, upon pain of infamy; a ſeverer puniſhment upon ingenuous natures than a pecuniary mulct.

4. The exceſs of diet in coſtly meats and drinks fetched from beyond the ſeas would be avoided: wiſe men will do it without a law, I would there might be a law to reſtrain fools. The exceſs of wine coſts the kingdom much, and returns nothing but ſurfeits and diſeaſes; were we as wiſe as eaſily we might be, within a year or two at the moſt, if we would needs be drunk with wines, we might be drunk with half the coſt.

5. If we muſt be vain and ſuperfluous in laces and embroideries, which are more coſtly than either warm or comely, let the curioſity be the manufacture of the natives; then it ſhould not be verified of us, *materiam ſuperabat opus.*

6. But inſtead of crying up all things, which are either brought from beyond ſea, or wrought here by the hands of ſtrangers, let us advance the native commodities of our own kingdom, and employ our countrymen before ſtrangers; let us turn the wools of the land into cloaths and ſtuffs of our own growth, and the hemp and flax growing here into linen cloth and cordage; it would ſet many thouſand hands on work, and thereby one ſhilling worth of the materials, would by induſtry be multiplied to five, ten, and many times to twenty times more in the value being wrought.

7. And of all ſorts of thrift for the publick good, I would above all others commend to your care the encouragement to be given to huſbandry, and the improving of lands for tillage; there is no ſuch uſury as this. The king cannot enlarge the bounds of theſe iſlands, which make up his empire, the ocean being the unremoveable wall which encloſeth them; but he may enlarge and multiply the revenue thereof by this honeſt and harmleſs way of good huſbandry.

8. A very great help unto trade are navigable rivers: they are ſo many indrafts to attain wealth, where by art and induſtry let them be made; but let them not be turned to private profit.

9. In the laſt place, I beſeech you, take into your ſerious conſideration, that *Indian* wealth, which this iſland and the ſeas thereof excel in, the hidden and rich treaſure of fiſhing: Do we want an example to follow? I may truly ſay to the *Engliſh*, *Go to the piſmire, thou ſluggard.* I need not expound the text; half a day's ſail with a good wind, will ſhew the mineral and the miners.

10. To regulate all theſe it will be worthy the care of a ſubordinate council, to whom the ordering of theſe things may be committed, and they give an account thereof to the ſtate.]

VIII. I come to the laſt of thoſe things which I propounded, which is, the court and curiality.

The other did properly concern the king, in his royal capacity, as *Pater patriae*; this more properly, as *Pater-familias:* and herein,

1. I shall, in a word, and but in a word only, put you in mind, that the king in his own perſon, both in reſpect of his houſhold or court, and in reſpect of his whole kingdom, (for a little kingdom is but as a great houſe-

hold,

hold, and a great houſhold as a little kingdom) muſt be exemplary, *Regis ad exemplum, &c.* But for this, God be praiſed, our charge is eaſy; for our gracious maſter, for his learning and piety, juſtice and bounty, may be, and is, not only a precedent to his own ſubjects, but to foreign princes alſo; yet he is ſtill but a man, and ſeaſonable *Memento's* may be uſeful; and, being diſcreetly uſed, cannot but take well with him.

2. But your greateſt care muſt be, that the great men of his court (for you muſt give me leave to be plain with you, for ſo is your injunction laid upon me,) your ſelf in the firſt place, who are firſt in the eye of all men, give no juſt cauſe of ſcandal, either by light or vain or by oppreſſive carriage.

3. The great officers of the king's houſhold had need be both diſcreet and provident perſons, both for his honour and for his thrift; they muſt look both ways, elſe they are but half-ſighted: yet in the choice of them, there is more latitude left to affection, than in the choice of counſellors, and of the great officers of ſtate, before touched, which muſt always be made choice of merely out of judgment; for in them the publick hath a great intereſt.

[And yet in theſe, the choice had need be of honeſt and faithful ſervants, as well as of comely outſides, who can bow the knee, and kiſs the hand, and perform other ſervices, of ſmall importance compared to this of publick employment. King *David*, Pſ. ci. 6, 7. propounded a rule to himſelf for the choice of his courtiers. He was a wiſe and a good king; and a wiſe and a good king ſhall do well to follow ſuch a good example; and if he find any to be faulty, which perhaps can't ſuddenly be diſcovered, let him take on him this reſolution as king *David* did, *There ſhall no deceitful perſon dwell in my houſe.* But for ſuch as ſhall bear office in the king's houſe, and manage the expences thereof, it is much more requiſite to make a good choice of ſuch ſervants, both for his thrift and for his honour.]

4. For the other miniſterial officers in court, (as, for diſtinction ſake, they may be termed) there muſt be alſo an eye unto them and upon them. They have uſually riſen in the houſhold by degrees, and it is a noble way, to encourage faithful ſervice: but the king muſt not bind himſelf to a neceſſity herein, for then it will be held *ex debito:* neither muſt he alter it, without an apparent cauſe for it: but to diſplace any who are in, upon diſpleaſure, which for the moſt part happeneth upon the information of ſome great man, is, by all means, to be avoided, unleſs there be a manifeſt cauſe for it.

5. In theſe things you may ſometimes interpoſe, to do juſt and good offices; but for the general, I ſhould rather adviſe: meddle little, but leave the ordering of thoſe houſhold affairs to the white-ſtaffs, which are thoſe honourable perſons, to whom it properly belongeth to be anſwerable to the king for it, and to thoſe other officers of the green-cloth, who are ſubordinate to them, as a kind of council, and a court of juſtice alſo.

6. Yet for the green-cloth law, (take it in the largeſt ſenſe) I have no opinion of it, farther than it is regulated by the juſt rules of the common laws of *England.*

7. Towards the ſupport of his majeſty's own table, and of the princes, and of his neceſſary officers, his majeſty hath a good help by purveyance, which juſtly is due unto him; and, if juſtly uſed, is no great burthen to the ſubject; but by the purveyors, and other under officers, is many times abuſed. In many parts of the kingdom, I think, it is already reduced to a certainty

certainty in money; and if it be indifferently and diſcreetly managed, it would be no hard matter to ſettle it ſo throughout the whole kingdom; yet to be renewed from time to time, for that will be the beſt and ſafeſt, both for the king and people.

8. THE king muſt be put in mind, to preſerve the revenues of his crown, both certain and caſual, without diminution, and to lay up treaſure in ſtore againſt a time of extremity; empty coffers give an ill ſound, and make the people many times forget their duty, thinking that the king muſt be beholden to them for his ſupplies.

9. I SHALL by no means think it fit, that he reward any of his ſervants with the benefit of forfeitures, either by fines in the court of ſtar-chamber, or high commiſſion courts, or other courts of juſtice, or that they ſhould be farmed out, or beſtowed upon any, ſo much as by promiſe, before judgment given; it would neither be profitable nor honourable.

10. BESIDES matters of ſerious conſideration, in the courts of princes, there muſt be times for paſtimes and diſports: when there is a queen, and ladies of honour attending her, there muſt ſometimes be maſques, and revels, and interludes; and when there is no queen, or princeſs, as now; yet at feſtivals, and for entertainment of ſtrangers, or upon ſuch occaſions, they may be fit alſo: yet care would be taken, that, in ſuch caſes, they be ſet off more with wit and activity, than with coſtly and waſtful expences.

11. BUT for the king and prince, and the lords and chivalry of the court, I rather commend, in their turns and ſeaſons, the riding of the great horſe, the tilts, the barriers, tennis, and hunting, which are more for the health and ſtrength of thoſe who exerciſe them, than in an effeminate way to pleaſe themſelves and others.

AND now the prince groweth up faſt to be a man, and is of a ſweet and excellent diſpoſition; it would be an irreparable ſtain and diſhonour upon you, having that acceſs unto him, if you ſhould miſlead him, or ſuffer him to be miſled by any looſe or flattering paraſites: the whole kingdom hath a deep intereſt in his virtuous education; and if you, keeping that diſtance which is fit, do humbly interpoſe your ſelf, in ſuch a caſe, he will one day give you thanks for it.

12. YET dice and cards may ſometimes be uſed for recreation, when field-ſports cannot be had; but not to uſe it as a mean to ſpend the time, much leſs to miſpend the thrift of the gameſters.

*SIR*, I ſhall trouble you no longer; I have run over theſe things as I firſt propounded them; pleaſe you to make uſe of them, or any of them, as you ſhall ſee occaſion; or to lay them by, as you ſhall think beſt, and to add to them, as you daily may, out of your experience.

I MUST be bold, again, to put you in mind of your preſent condition; you are in the quality of a centinel; if you ſleep, or neglect your charge, you are an undone man, and you may fall much faſter than you have riſen.

I HAVE but one thing more to mind you of, which nearly concerns your ſelf; you ſerve a great and gracious maſter, and there is a moſt hopeful young prince, whom you muſt not deſert; it behoves you to carry your ſelf wiſely and evenly between them both: adore not ſo the riſing ſon, that you forget the father, who raiſed you to this height; nor be you ſo obſequious to the father, that you give juſt cauſe to the ſon, to ſuſpect that you neglect him: but carry your ſelf with that judgment, as, if it be poſſible,

may pleaſe and content them both, which, truly, I believe, will be no hard matter for you to do; ſo may you live long beloved of both.

[If you find in theſe or any other your obſervations (which doubtleſs are much better than theſe looſe collections) any thing which you would have either the father or the ſon to take to heart, an admonition from a dead author, or a caveat from an impartial pen, whoſe aim neither was nor can be taken to be at any particular by deſign, will prevail more and take better impreſſion than a downright advice; which perhaps may be miſtaken as if it were ſpoken magiſterially.

Thus may you long live an happy inſtrument for your king and country: you ſhall not be a meteor or a blazing ſtar, but *ſtella fixa:* happy here and more happy hereafter. *Deus manu ſua te ducat:*] which is the hearty prayer of

*Your moſt obliged and devoted Servant.*

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